

SHARP SERVICE MANUAL

No. 00ZUX110DESME



FACSIMILE

UX-1100
MODEL FO-1450

Parts marked with "⚠" is important for maintaining the safety of the set. Be sure to replace these parts with specified ones for maintaining the safety and performance of the set.

SHARP CORPORATION

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The contents are subject to change without notice.

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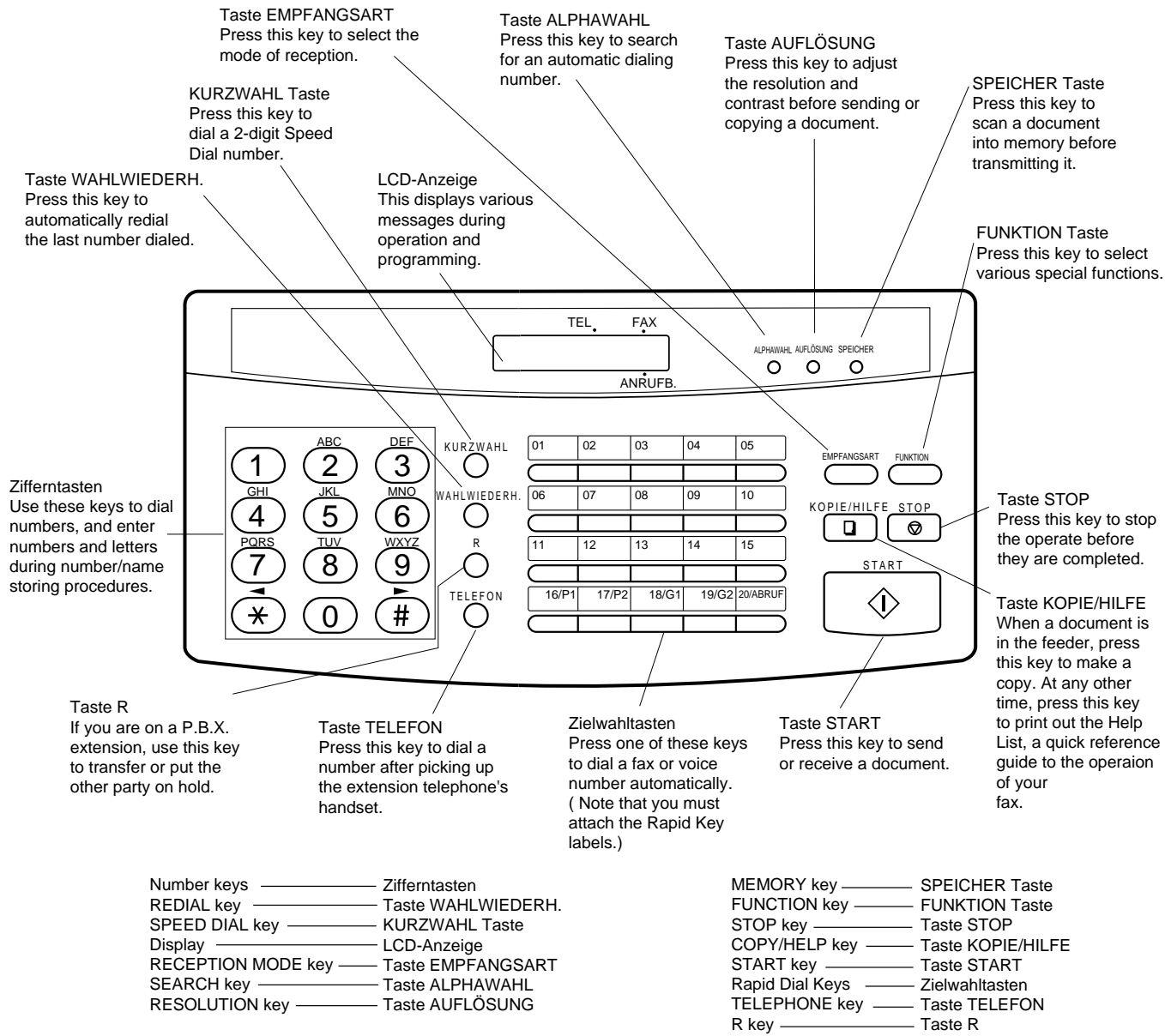
CHAPTER 1. GENERAL DESCRIPTION

[1] Specifications

Applicable telephone line:	Public switched telephone network/PBX	Effective scanning width:	210 mm max.
Compatibility:	ITU-T (CCITT) G3 mode	Automatic document feeder:	20 sheets max.
Configuration:	Half-duplex, desktop transceiver	Halftone (gray scale):	64 levels
Memory size*:	512 KB (approx. 31 average pages with ECM function off)	Contrast control:	Automatic/Dark selectable
Compression scheme:	MH, MR, MMR	Copy function:	Single/Multi-copy/Sort-copy (99 copies/page)
Scanning method:	Flat-bed, solid-state CCD	Noise emission:	Less than 70 dBA (Measured according to DIN 45635.)
Resolution:	Horizontal: 8 dots/mm Vertical: Standard—3.85 lines/mm Fine/Halftone—7.7 lines/mm Super fine—15.4 lines/mm	Power requirements:	220 - 230 V AC, 50 Hz 5 - 35°C, 20 to 80 % RH
Recording system:	Thermal transfer recording	Power consumption:	Stand-by: 6 W Maximum: 110 W
Display:	7 x 5 dots, 1 line by 16-digit display	Dimensions:	Width: 363 mm Depth: 488 mm Height: 188 mm (Without attachments)
Paper capacity:	300 sheets	Weight:	Approx. 5.9kg
Reception modes:	Auto/Manual/Answering machine	* Based on ITU-T (CCITT) Test Chart #1 at standard resolution in MMR (Memory Transmission), excluding time for protocol signals (i.e., ITU-T phase C time only).	
Modem speed:	9600 bps with automatic fallback to 7200, 4800, or 2400 bps		
Transmission time* :	Approx. 9 seconds		
Effective recording width:	203 mm (average)		
Input document size:	Auto feeding: Width — 148 to 216 mm Length — 128 to 356 mm Manual feeding: Width — 148 to 216 mm Length — 128 to 1000 mm		

As a part of our policy of continuous improvement, SHARP reserves the right to make design and specification changes for product improvement without prior notice. The performance specifications figures indicated are nominal values of production units. There may be some deviation from these values in individual units.

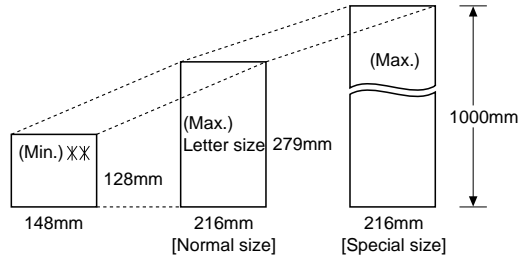
[2] Operation panel



[3] Transmittable documents

1. Document Sizes

Normal size	width	148 – 216 mm
	length	128 – 279 mm



XX Use document carrier sheet for smaller documents.

- * With special sizes, only one sheet can be fed into the machine at a time. Insert next page into feeder as current page is being scanned.

2. Paper Thickness & Weight

Normal size	ADF 10 sheets	Thickness	0.06–0.12 mm
		Weight	52–104 g/cm ²
	ADF 20 sheets	Thickness	0.06–0.09 mm
		Weight	52–74.3 g/cm ²
Special size	Thickness		0.12–0.20 mm
	Weight		52–157 g/cm ²

3. Document Types

- Normal paper
Documents handwritten in pencil (No. 2 lead or softer), fountain pen, ball-point pen, or felt-tipped pen can be transmitted. Documents of normal contrast duplicated by a copying machine can also be transmitted.
- Diazo copy (blue print)
Diazo copy documents of a normal contrast may be transmitted.
- Carbon copy
A carbon copy may be transmitted if its contrast is normal.

4. Cautions on Transmitting Documents

- Documents written in yellow, greenish yellow, or light blue ink cannot be transmitted.
- Ink, glue, and correcting fluid on documents must be dry before the documents can be transmitted.
- All clips, staples and pins must be removed from documents before transmission.
- Patched (taped) documents should be copied first on a copier and then the copies used for transmission.
- All documents should be fanned before insertion into the feeder to prevent possible double feeds.

5. Automatic Document Feeder Capacity

Number of pages that can be placed into the feeder at anytime is as follows:

Normal size: max. ADF 20 sheets

Special size: single sheet only (manual feed)

- NOTES:
- When you need to send or copy more pages than the feeder limit, place additional pages in feeder when last page in feeder is being scanned.
 - Place additional pages carefully and gently in feeder. If force is used, double-feeding or a document jam may result.

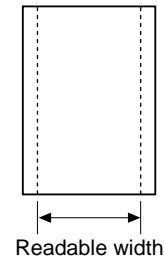
6. Readable Width & Length

The readable width and length of a document are slightly smaller than the actual document size.

Note that characters or graphics outside the effective document scanning range will not be read.

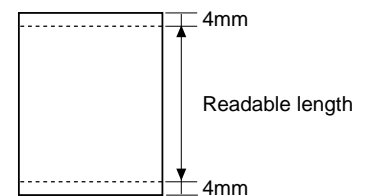
• Readable width

210 mm, max.



• Readable length

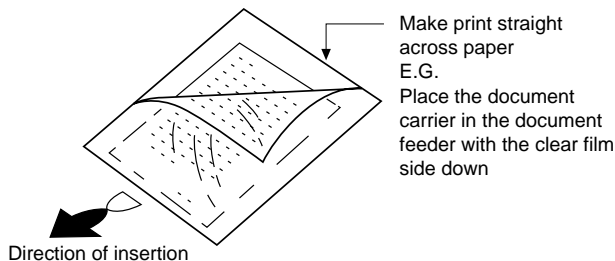
This is the length of the document sent minus 4 mm from the top and bottom edges.



7. Use of Document Carrier Sheet

A document carrier sheet must be used for the following documents.

- Those with tears.
- Those smaller than size 148 mm (W) x 128 mm (L).
- Carbon-backed documents



NOTE: To transmit a carbon-backed document, insert a white sheet of paper between the carbon back of the document and the document carrier.

- Those containing an easily separable writing substance (e.g., tracing paper written on with a soft, heavy lead pencil).

NOTES:

- When using the document carrier, carefully read the instructions written on the back.
- If the document carrier is dirty, clean it with a soft, moist cloth, and then dry it before using for transmission.
- Do not place more than one document in the carrier at a time.

[4] Installation

1. Site selection

Take the following points into consideration when selecting a site for this model.

ENVIRONMENT

- The machine must be installed on a level surface.
- Keep the machine away from air conditioners, heaters, direct sunlight, and dust.
- Provide easy access to the front, back, and sides of the machine.
In particular, keep the area in front of the machine clear, or the original document may jam as it comes out after scanning.
- The temperature should be between 5° and 35°C.
- The humidity should be between 30% and 85% (without condensation).

ELECTRICITY

AC220-230 V, 50 Hz, grounded (2-prong) AC outlet is required.

Caution!

- Connection to a power source other than that specified will cause damage to the equipment and is not covered under the warranty.
- If your area experiences a high incidence of lightning or power surges, we recommend that you install a surge protector for the power and telephone lines. Surge protectors can be purchased at most telephone specialty stores.

If the machine is moved from a cold to a warm place...

If the machine is moved from a cold to a warm place, it is possible that the reading glass may fog up, preventing proper scanning of documents for transmission. To remove the fog, turn on the power and wait approximately 2 hours before using the machine.

TELEPHONE JACK

A standard RJ11C telephone jack must be located near the machine. This is the telephone jack commonly used in most homes and offices.

- Plugging the fax machine into a jack which is not an RJ11C jack may result in damage to the machine or your telephone system. If you do not know what kind of jack you have, or needed to have one installed, contact the telephone company.

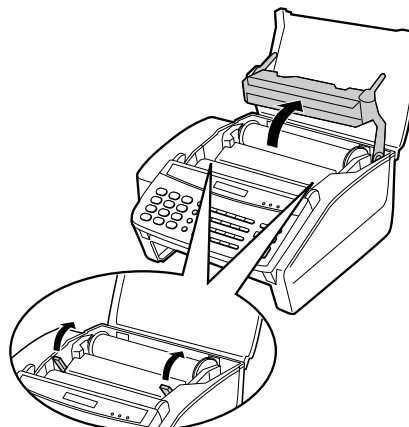
2. Installing the imaging film (UX-10CR)

- ① Grasp the finger hold on the right side of the printing compartment cover, and pull up to open the cover.

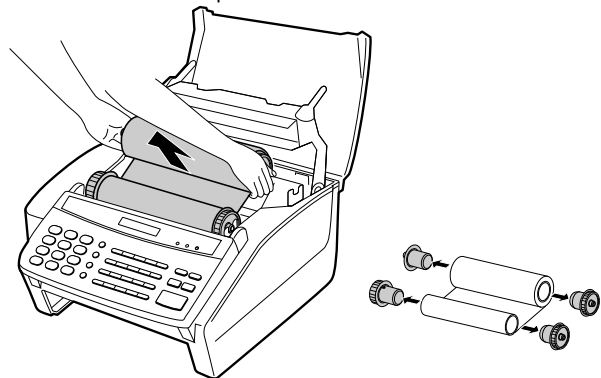


- ② Push back the green levers on each side of the printing compartment, and rotate the printing head frame up and to the rear.

- **Caution!** The printing head (the strip of metal on the underside of the frame) applies heat to the printing film. It may be hot if a document has just been printed.

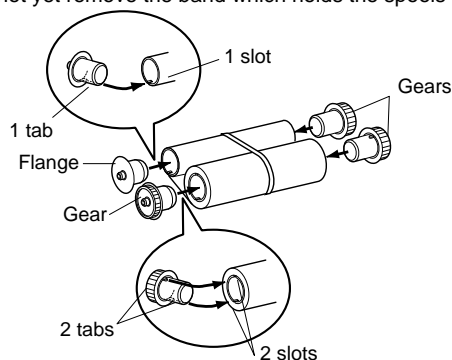


- ③ If you are replacing the imaging film, take the old film out of the printing compartment and remove the three gears and the flange from the ends of the spools.

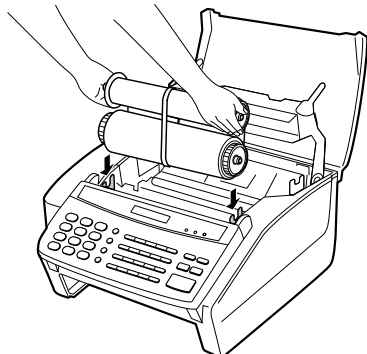


- ④ Take the new film out of its package, and insert the three gears and the flange into the ends of the spools as shown. Make sure that the tabs on the gears and the flange fit properly into the slots in the ends of the spools.

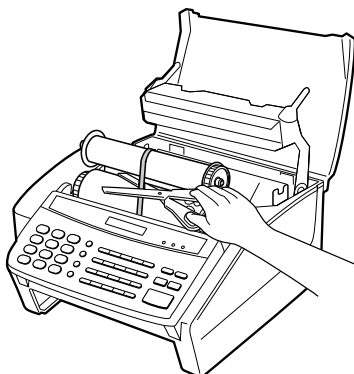
- The flange has one tab, and the gears each have 2 tabs.
- Do not yet remove the band which holds the spools together.



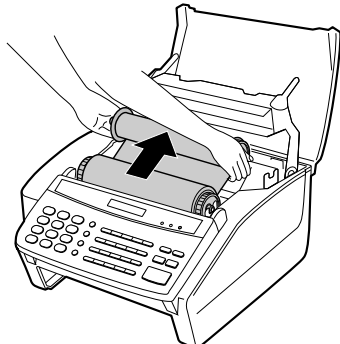
- ⑤ Hold the empty spool so that the flange is on the left, and lower the spools into the front of the printing compartment so that the gears in the ends of the spool with the film fit into the slots on each side of the printing compartment.



- ⑥ Cut the band which holds the spools together with scissors, and remove it.

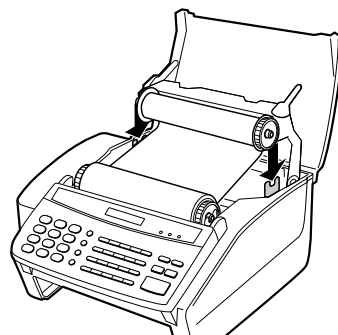


- ⑦ Pull the empty spool toward the back of the compartment, unwinding the blue leader from the spool with the film as you pull.

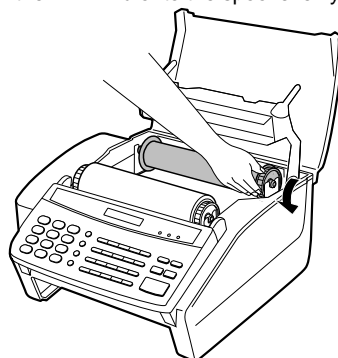


- ⑧ Insert the empty spool into the back of the compartment so that the gear and the flange fit into the slots on the sides of the compartment.

- Make sure that the gear engages with the gear below it.



- ⑨ Wind the film slightly (rotate the gear on the right side of the empty spool) so that there is no slack in the film. Make sure that both edges of the film wind onto the spool evenly.

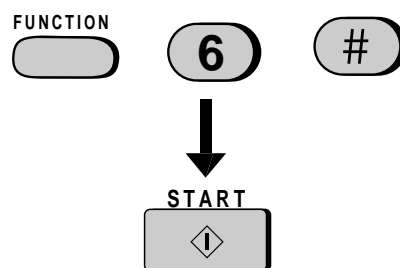


- ⑩ Rotate the printing head frame back down, and press down on the "PUSH" mark in the center of the frame until the frame clicks into place. Close the printing compartment cover.



- ⑪ Initialize the film counter by pressing the **FUNCTION** key, the "6" key, and the "#" key on the operation panel. Make sure that "INITIALIZE FILM" appears in the display, and then press the **START** key.

- You must initialize the film counter to make the machine wind the film to the starting position for printing. If this is not done, the first pages you print will come out blank.

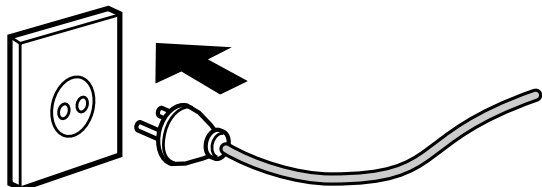


3. Assembly and connections

- ① Plug the power cord into a 220-230 V, 50 Hz, grounded (2-prong) outlet.

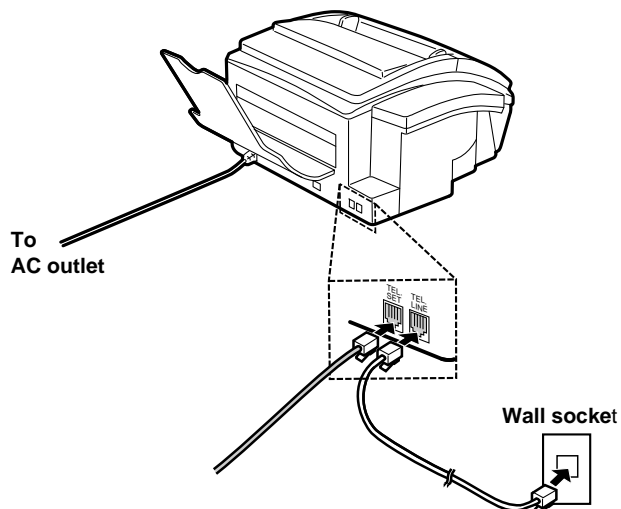
Caution: Do not plug the power cord into any other kind of outlet. This will damage the machine and is not covered under the warranty.

AC outlet

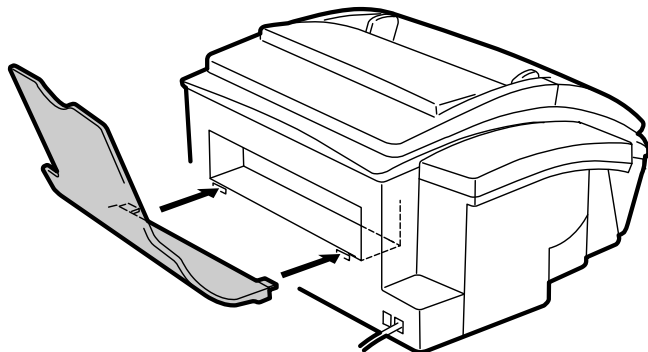


- ② Insert one end of the telephone line cord into the "TEL. LINE" jack. Insert the other end into a standard single-line telephone wall socket.

Be sure to insert the telephone line cord into the "TEL. LINE" socket. **Do not** insert it into the "TEL. SET" socket.



- ③ Attach the received document tray by inserting the tabs into the holes at the rear of the fax.

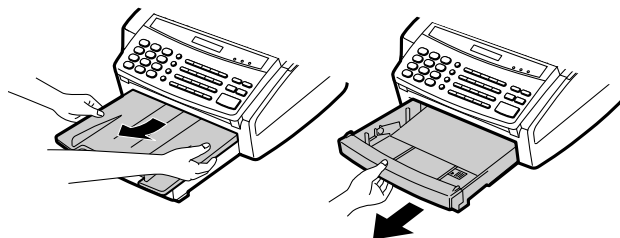


4. Loading printing paper

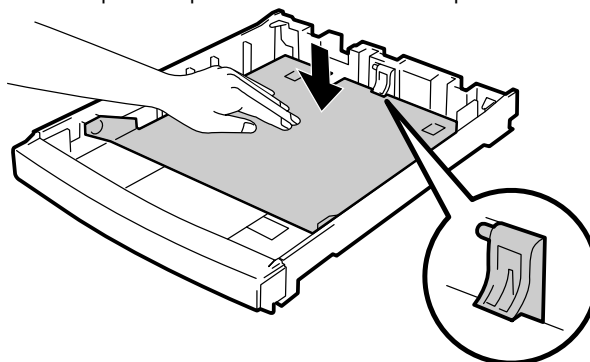
The paper tray holds the paper on which received documents and copies are printed. Up to 300 sheets of A4 size paper from 60 to 90 g/cm² can be loaded in the tray. For the best results, we recommend that you use Sharp FO-16NC (A4 size) paper.

- ① If the paper tray is in the fax machine, remove the cover. Grasp the end of the paper tray, lift it slightly, and pull it out of the fax machine.

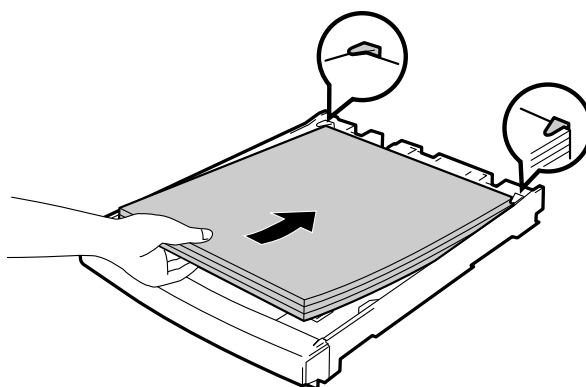
• **Important:** You must remove the paper tray from the fax machine to add paper.



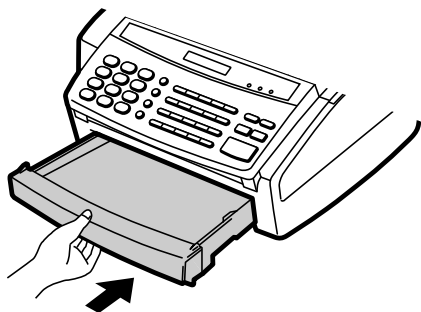
- ② Push the pressure plate down until it locks into position.



- ③ Fan the paper and then place it in the paper tray, print side up. Make sure the corners of the paper go under the holders, and then shake the tray gently to straighten the paper.

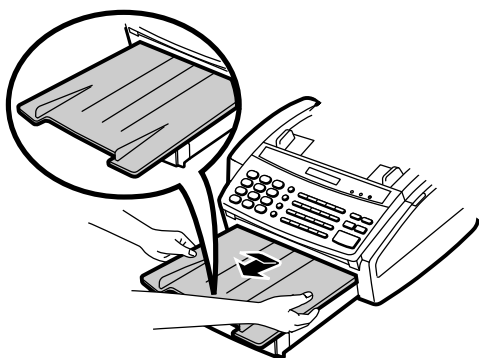


- ④ Insert the paper tray into the fax machine, making sure it clicks into place.

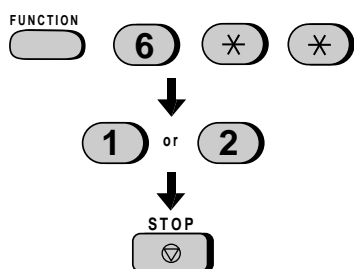


- ⑤ Replace the paper tray cover.

- The paper tray cover also serves as a tray for original documents which come out of the fax after scanning for transmission or copying. You can pull out the cover as needed to ensure that it catches the documents.



- ⑥ Your fax has been set at the factory to print on regular paper. If you have loaded Sharp FO-16NC paper, you must change this setting to "HIGH QUALITY". To change the setting, press the "FUNCTION" key, the "6" key, the "*" key two times, and then press "1" to select regular, or "2" to select Sharp high quality paper. When finished, press the STOP key. Be sure to change this setting again if you change back to regular paper.



5. Clearing paper jams

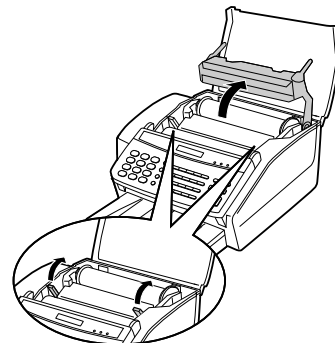
If a document doesn't feed properly during transmission or copying, or DOCUMENT JAMMED appears in the display, first try pressing the **START** key. If the document doesn't feed out, open the operation panel (grasp the front edge at the "PANEL RELEASE" mark and pull up) and pull it out gently.

- ① Grasp the finger hold on the right side of the printer compartment cover, and pull up to open the cover.

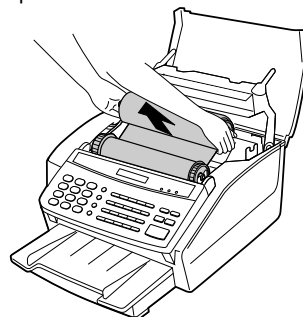


- ② Push back the green levers on each side of the printing compartment, and rotate the printing head frame up and to the rear.

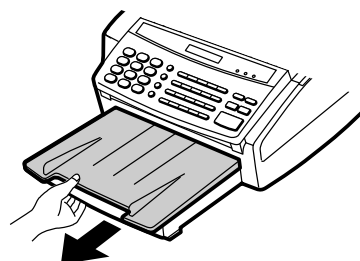
- Caution!** The printing head (the strip of metal on the underside of the frame) applies heat to the printing film. It may be hot if a document has just been printed.



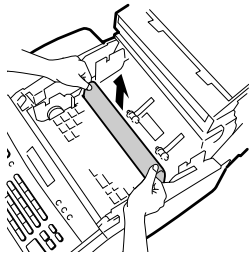
- ③ Remove the imaging film from the printing compartment and set it on a sheet of paper.



- ④ Remove the paper tray from the fax.



⑤ Gently pull the jammed paper out of the printing compartment.



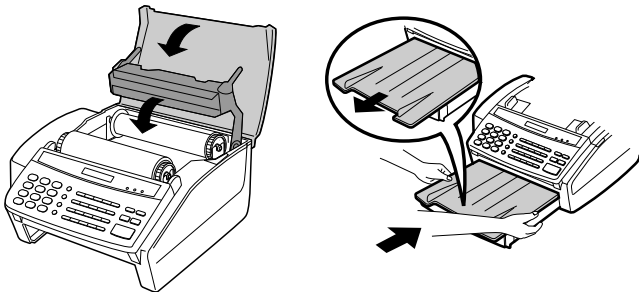
⑥ Replace the imaging film, making sure that the flange goes into the rear slot on the left side of the printing compartment. Also make sure that the right, rear gear engages with the gear below it.



⑦ Wind the film slightly (rotate the gear on the right side of the empty spool) so that there is no slack in the film. Make sure that both edges of the film wind onto the spool evenly.



⑧ Rotate the printing head back into place. Close the printing compartment cover and replace the paper tray.



Letters and numbers
To enter a letter or number, press the appropriate key repeatedly until the desired number/letter appears in the display (the number appears first, then the letters in the order marked above the key).

Space
Press this key twice to enter a space.

Delete
Press this key to delete the letter highlighted by the cursor (if the cursor is to the right of the last letter entered, it will backspace and delete the last letter).

Shift
Press this key once to change case (press it again to change back).

Cursor left
Press this key to move the cursor to the left.

Cursor right
Press this key to move the cursor to the right.

Symbols
Press either key repeatedly until the desired symbol appears (see the symbol list on the following page).

1 GHI	2 ABC JKL	3 DEF MNO
4 PQRS	5 TUV	6 WXYZ
7	8	9
* 0	#	

KURZWahl
WAHLWIEDERH.
R
TELEFON

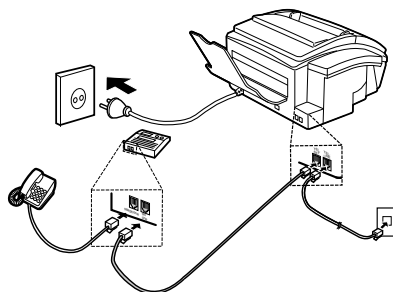
[5] Quick reference guide

FUNCTION key menu

The following chart shows the layout of the functions and settings accessed by pressing the **FUNCTION** key. First press the **FUNCTION** key, the appropriate numeric key as shown, and then "#" or "*" until the desired item appears. Instructions for making each setting appear in the display. If you have any difficulty, refer to the detailed instructions on the page shown below the setting.

	FUNCTION								
	1	2	3	4	5	6	7	* 0	#
#	Timer Mode	Listing Mode	Entry Mode	Optional Settings	Cover Sheet	Print Set-up	Program/Group	Page Counter	PC Mode
↓	Send Mode	Activity Report	Fax/Tel Numbers for Auto Dialing	Fine Resolution Priority	Cover Sheet Header	Initialize Film	Program Entry Mode		
	Poll Mode	Timer List	Own Number and Name Set	Number of Rings in Auto Mode	Quiet Detect Time	Reception Ratio	Group Entry Mode		
		Telephone Number List	Polling Security Select	Recall Wait Interval	TAD/PC Fails	2 in 1 Print			
		Passcode List	Passcode Numbers for Polling	Recall Times	Distinctive Ringing	Paper Type Set			
		Option Setting List	Date and Time Set	Remote Reception Number	Fax Signal Receive	Paper Size Set			
		Anti Junk Fax Number List	Store Junk Fax Number	Remote Reception Select	Junk Number Check	Copy Cut-off			
		Program and Group List	Priority Call Number	Transaction Report Print Select	Polling				
		Caller ID List		Dial Mode	Caller ID				
		Print Setup List		Transaction Report Print Select	Autocover Sheet				
				Dial Mode	Activity Report				
				TAD Connected	ECM				
* ↑									

INSTALLATION



1. Plug one end of the telephone line into the "TEL. LINE" socket on the rear of the fax, and the other end into your telephone wall socket.
2. Plug the power cord into a grounded, 220-230 V outlet.

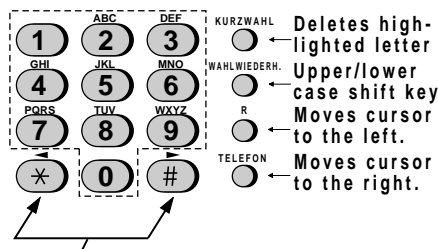
INSTALLATION WITH AN ANSWERING MACHINE AND/OR EXTENSION PHONE

3. Remove the seal covering the "TEL. SET" socket on the rear of the fax. Connect an extension telephone or answering machine to the "TEL. SET" socket. (The answering machine telephone line socket, not its extension phone socket, should be connected to the "TEL. SET" socket.)
4. If desired, connect an extension phone to the answering machine.

ENTERING YOUR NAME AND NUMBER

The law requires your name and fax number to appear on all documents you send. To program your fax to do this automatically, follow the steps below:

1. Press the **FUNCTION** key and then press "3": "ENTRY MODE" will appear in the display.
2. Press the "#" key twice: "OWN NUMBER SET" will appear in the display.
3. Press the **START** key:
4. Enter your fax number (max. of 20 digits) by pressing the number keys.
- ♦ If you make a mistake, press the **R** key to move the cursor back to the mistake, then enter the correct number or letter. (To move the cursor forward, press the **TELEPHONE** key.)
5. Press the **START** key:
6. Enter your name by pressing the appropriate number keys as shown below. Press each key one or more times until the desired letter appears in the display.



Press either key one or more times to select and enter a symbol.

- ♦ Enter "Q" with the "7" key, and "Z" with the "9" key (these are not marked on the machine). Enter a space with the "1" key.
- ♦ To enter two letters in succession which require using the same key, press the **TELEPHONE** key after entering the first letter.

Example: To enter "ABZ Co.", press:

"2" twice for the letter A,

Press **TELEPHONE** to move the cursor to the right,

"2" three times for the letter B,

"9" five times for the letter Z,

"1" twice for a space,

"2" four times for the letter C,

Press **REDIAL** for a lower case letter,

"6" four times for the letter O,

"#" once for a period.

7. When finished, press the **START** key and then the **STOP** key.

SETTING THE DATE & TIME

To set date and time, press the following sequence of keys:

"DATE & TIME SET" will appear.

Press the **START** key:

Enter two digits for the Month (01 through 12).

Enter two digits for the Date (01 through 31).

Enter two digits for the Year (00 through 99).

Enter two digits for the Hour (01 through 12).

Enter two digits for the Minute (00 through 59).

When finished, press the **START** key and then the **STOP** key:

STORING & CLEARING NUMBERS FOR AUTOMATIC DIALING

To store a new number or change an existing number, press the following sequence of keys:



"FAX/TEL # MODE" will appear.

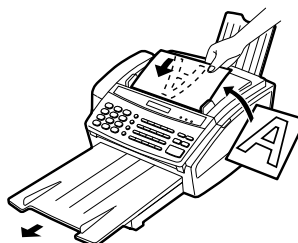
1. Press the "1" key:
2. Enter a 2-digit number (from "01" to "99") by pressing the number keys. This will be the Speed Dial number.
3. Press the **START** key:
4. Enter the name of the location by pressing number keys (max. of 20 characters).
5. Press the **START** key:
6. Return to Step 3 to store another number, or press **STOP** to exit.

To clear a Speed Dial number, press the following sequence of keys:

Press "2" and then enter the 2-digit Speed Dial number.

Press:

SENDING DOCUMENTS



Place your document (up to 20 pages) face down in the document feeder.

Rapid Key Dialing

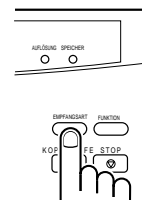
Press the appropriate Rapid Key. Transmission will begin.

Speed Dialing

1. Press the **SPEED DIAL** key:
2. Enter the Speed Dial number by pressing the number keys.
3. Press:

Direct Keypad Dialing

1. Enter the fax number by pressing the number keys.
2. Press:



RECEIVING DOCUMENTS

Press the **RECEPTION MODE** key until "AUTO" or "MANU" appears in the display.

AUTO reception: The fax will automatically answer after four rings and receive the incoming documents.

MANUAL reception: Lift the handset when the fax rings. If you hear a fax tone, wait until "RECEIVING" appears in the display, then hang up (if "RECEIVING" doesn't appear, press the **START** key). If the calling party talks to you, press your **START** key to begin reception.

CHAPTER 2. ADJUSTMENTS

[1] Adjustments

General

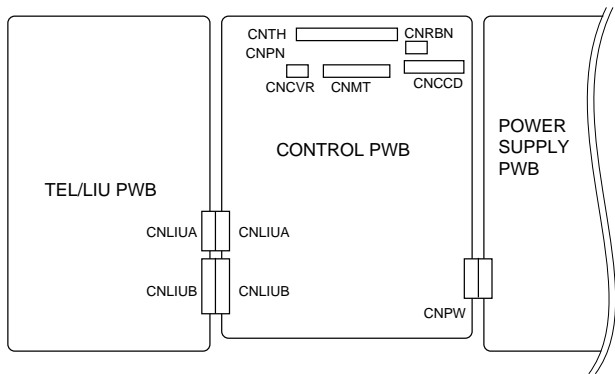
Since the following adjustments and settings are provided for this model, make adjustments and/or setup as necessary.

1. Adjustments

Adjustments of output voltage (FACTORY ONLY)

1. Install the power supply unit in the machine.
2. Set the recording paper and document.
3. When the document is loaded, power is supplied to the output lines. Confirm that outputs are within the limits below.

Output voltage settings



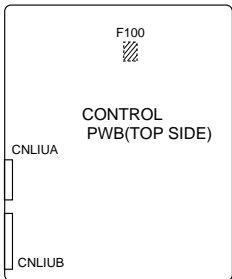
Output	Voltage limits
+5V	4.75V ~ 5.25V
VM (+24V)	23.3V ~ 24.7V

Connector No.	CNPW
Pin No.	
1	MG
2	MG
3	MG
4	VM
5	VM
6	DG
7	DG
8	+5V

2. IC protectors replacement

ICPs (IC Protectors) are installed to protect the motor driver circuit. ICPs protect various ICs and electronic circuits from an overcurrent condition.

The location of ICPs are shown below:



(1) F100 (ICP-S07) is installed in order to protect IC's from an over-current generated in the motor drive circuit. If F100 is open, replace it with a new one.

3. Settings

(1) Dial mode selector

DIAL mode (Soft Switch No. SWB4 DATA No. 3)

(step 1) Select "OPTION SETTING".

KEY: **FUNCTION** **4**
DISPLAY: **OPTION SETTING** ↔ **PRESS ✕ OR #**

(step 2) Select "DIAL MODE".

KEY: **# # # # # #**
DISPLAY: **DIAL MODE** ↔ **1=TONE, 2=PULSE**

Cursor
When initially registering,
the mode shows 2=PULSE.
When registering again, the
mode which was registered
formerly is shown.

(step 3) Select, using "1" or "2".

KEY: **1**
DISPLAY: **TONE SELECTED**
KEY: **2**
DISPLAY: **PULSE SELECTED**

(step 4) End, using the "STOP" key.

KEY: **STOP**

[2] Diagnostics and service soft switch

1. Operating procedure

(1) Entering the diagnostic mode

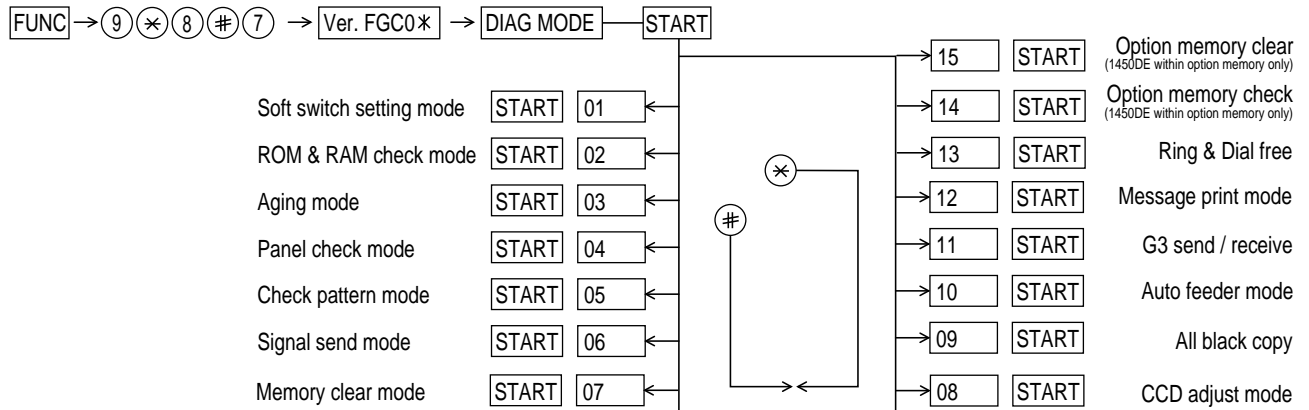
Press **[FUNC]** → **[9]** → **[✕]** → **[8]** → **[#]** → **[7]**, and the following display will appear.

[ROM Ver. FGC0✕] After 2 sec: **[DIAG MODE]**

FGC0✕

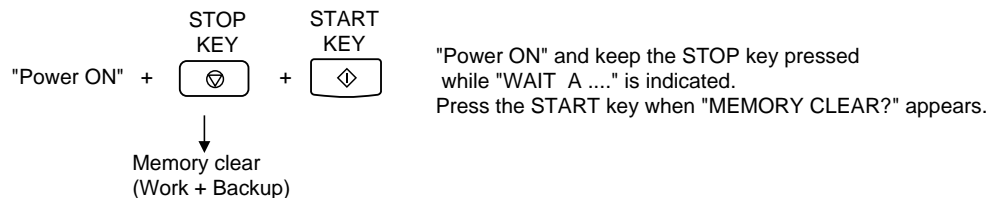
Then press the **[START]** key and country name will appear. Select the desired item with the **[✕]** key or the **[#]** key or select with the rapid key. Enter the mode with the **[START]** key.

(Diag•specifications)



If the dial mode cannot be set, repeat the dial mode operation, performing the following operation.

After the power is turned on and "WAIT A MOMENT" is indicated, press the **[STOP]** key.



2. Diagnostic items

ITEM No.	RAPID key	Contents	Function
1	01	Soft switch setting mode	Display soft SW contents, and changes the setting.
2	02	ROM & RAM check mode	Checks program ROM (256KByte) and work RAM (32KByte).
3	03	Aging mode	Prints the check pattern at the speed of 1 sheet/5 minutes.
4	04	Panel check mode	Displays the name of key depressed on the operation panel.
5	05	Check pattern mode	Prints 1 sheets of check pattern.
6	06	Signal send mode	Sends modem signals sequentially.
7	07	Memory clear mode	Clears the backup memory contents to reset it to the initial state.
8	08	CCD adjust mode	Used for CCD adjustment. Executes copy operation. When the [STOP] key is pressed, the unit goes into the wait state. When the [START] key is pressed again, the unit starts operation again.
9	09	All black copy mode	Performs all-dot printing (2m). (Check thermal head operation)
10	10	Auto feeder mode	Feeds the original documents.
11	11	G3 send/receive	Makes a communication in direct connection with G3.
12	12	Message print mode	The display message of each language is printed out together.
13	13	Ring & dial free mode	Allows CI detection of 13Hz or more. Eliminates dial tone detection in auto dial.
14	14	Option memory check	Checks option memory write/read. (FO-1450DE within option memory only)
15	15	Option memory clear	Checks option memory clearing. (FO-1450DE within option memory only)

3. 14. Option memory check (FO-1450DE within option memory only)

Data is written into and read from the option memory to check the data conformity. When the unit enters this mode, the check is started.

3. 15. Option memory clear (FO-1450DE within option memory only)

Data in the option memory is cleared (memory clear). When the unit enters this mode, the check is started.

* Operation of hardware and signal in the option memory check mode and option memory clear mode, and the result of check

The result is announced by the buzzer beeps. The result of check is printed.

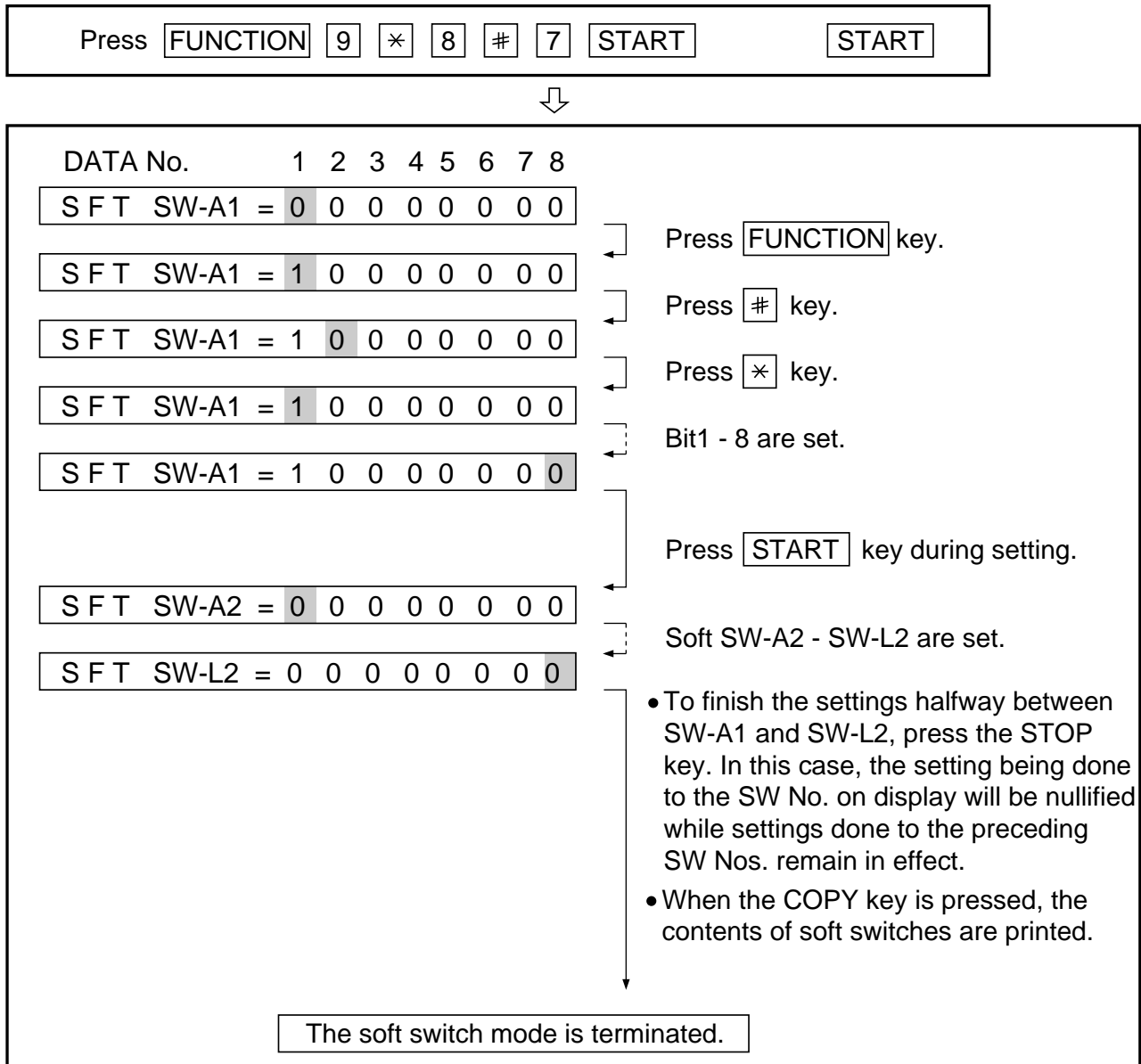
Beeps

0 → No error

1 → Memory error

4. How to make soft switch setting

To enter the soft switch mode, make the following key entries in sequence.



5. Soft switch description

• Soft switch

SW NO.	DATA NO.	ITEM	Switch setting and function				Initial setting								Remarks
			1		0		DE	AT	CH	NL	IT	BE	SE	ES	
SW A1	1	Protect from echo	No		Yes		0								
	2	Forced 4800 BPS reception	Yes		No		0								
	3	Footer print	Yes		No		0								
	4	Length limitation of copy/send/receive	No limit		Copy/send: 1m Receive: 1.5m		0								
	5	CSI transmission	No transmitted		transmitted		0								
	6	DIS receive acknowledgement during G3 transmission	Twice		NSF: Once DIS: Twice		0								
	7	Non-modulated carrier for V29 transmission modem	Yes		No		0								
	8	EOL detect timer	25 s		13 s		0								
SW A2	1 2 3 4	Modem speed		V.29		V.27 ter		0 0 0 0 1							
				9600	7200	4800	2400								
				0	0	0	0								
				0	0	0	0								
				0	1	1	0								
	1	1	0	0											
	5	Sender's information transmit	No		Yes		0								
	6	Reserved					0								
	7	Communication error treatment in RTN sending mode (reception)	No communication error		Communication error		0								
8	CNG transmission	No		Yes		0									
SW A3	1 2	CED tone signal interval		1000ms	750ms	500ms	75ms	0 0							
			No. 1	1	1	0	0								
			No. 2	1	0	1	0								
	3	MR coding	No		Yes		0								
	4	ECM mode	No		Yes		0								OPTION
	5	ECM MMR mode	No		Yes		0								
	6	Reserved					0								
	7	Reserved					0								
8	Reserved					0									
SW A4	1	Signal transmission level	Binary input				0								
	2		No. = 16 8 4 2 1				1								
	3		1 2 3 4 5				0								
	4		0 1 0 0 0 (-8dBm)				1								
	5						0								
	6	Protocol monitor (error print)	Printed at com. error		Not printed		0								
	7	Protocol monitor	Yes		No		0								
	8	Line monitor	Yes		No		0								
	SW A5	1 2	Digital line equalization setting (Reception)		7.2km		0km		1 1						
No. 1				1		0									
No. 2				1		0									
3		Reserved					0								
4		Reserved					0								
5		Reserved					0								
6		Reserved					0								
7		Error criterion	10 ~ 20 %		5 ~ 10 %		0								
8	Anti junk fax check	Yes		No		0									OPTION

SW NO.	DATA NO.	ITEM	Switch setting and function		Initial setting								Remarks
			1	0	DE	AT	CH	NL	IT	BE	SE	ES	
SW A6	1	Auto gain control (MODEM)	Enable	Disable	1								
	2	End Buzzer	Yes	No	1								
	3	Disconnect the line when DIS is received in RX mode	No	Yes	1								
	4	Equalizer freeze control (MODEM)	On	Off	0								
	5	Equalizer freeze control 7200 BPS only	No	Yes	0								
	6	Reserved			0								
	7	Reserved			0								
	8	Reserved			0								
SW B1	1	Reserved			0								
	2	Reserved			0								
	3	Reserved			0								
	4	Reserved			0								
	5	Recall times	Binary input		0								
	6		No. = 8 4 2 1		0								
	7		5 6 7 8		1								
	8		0 0 1 0 (Twice)		0								
SW B2	1	Dial pausing (sec/pause)	4 sec	2 sec	1								
	2	Dial tone detection (before auto dial)	No	Yes	0								
	3	Line current detection (before auto dial)	No	Yes	0								DE/AT not work (Always "No")
	4	Busy tone detection (after auto dial)	No	Yes	0								
	5	Waiting time after dialing	90 sec	as is PTT	0								
	6	Reserved			0								
	7	Reserved			0								
	8	PBX connection	Yes	No	0								OPTION
SW B3		PBX recall function (R key select)		No Ope.	No Ope.	Earth	Flash						
	1		No. 1	0	0	1	1						
	2		No. 2	0	1	0	1						OPTION
	3	Reserved											
		PBX select		ID	ID	Earth	Flash						
	4		No. 4	0	0	1	1						
	5		No. 5	0	1	0	1						OPTION
	6	Reserved											
SW B4	1	Reserved			0								
	2	Reserved			0								
	3	Dial mode	Tone	Pulse	0								OPTION (EXCEPT FOR NL/SE)
	4	Pulse → Tone change function by ✕ key	Enable	Disable	1								
	5	Reserved			0								
	6	Reserved			0								
	7	Reserved			0								
	8	Reserved			0								

SW NO.	DATA NO.	ITEM	Switch setting and function					Initial setting								Remarks	
			1		0			DE	AT	CH	NL	IT	BE	SE	ES		
SW B5	1	DTMF signal transmission level (Low)	Binary input					1									
	2		No. = 16 8 4 2 1					0									
	3		1 2 3 4 5					1									
	4		1 0 1 0 1 (-10.5dBm)					0									
	5							1									
	6	Reserved						0									
	7	Reserved						0									
	8	Reserved						0									
SW B6	1	DTMF signal transmission level (High)	Binary input					1									
	2		No. = 16 8 4 2 1					0									
	3		1 2 3 4 5					0									
	4		1 0 0 0 1 (-8.5dBm)					0									
	5							1									
	6	Reserved						0									
	7	Reserved						0									
	8	Reserved						0									
SW C1		Reading slice (Binary)		Factory setting	Light	Dark	Darker in dark mode										
	1		No. 1	0	1	0	1	0									
	2		No. 2	0	0	1	1	0									
		Reading slice (Half tone)		Factory setting	Light	Dark	Darker in dark mode										
	3		No. 3	0	1	0	1	0									
	4		No. 4	0	0	1	1	0									
	5	Line density selection	Fine		Standard			0								OPTION	
	6	Reserved							0								
	7	Reserved							0								
	8	Reserved							0								
	SW D1	1	Number of rings for auto receive	Binary input					0								
2		No. = 8 4 2 1					0										
3		1 2 3 4					0										
4		0 0 0 1 (once)					1							OPTION			
5		Automatic switching manual to auto receive mode	Reception after 5 rings		No reception			0									
6		Reserved							0								
7		CI detection	13 Hz or more		As is PTT			0									
8		Reserved							0								
SW D2	1	Reserved							0								
	2	Reserved							0								
	3	Reserved							0								
	4	Reserved							0								
	5	Reserved							0								
	6	Reserved							0								
	7	Reserved							0								
	8	Reserved							0								
SW E1	1	Reserved							0								
	2	Reserved							0								
	3	Reserved							0								
	4	Reserved							0								
	5	Reserved							0								
	6	Reserved							0								
	7	Reserved							0								
	8	Reserved							0								

SW NO.	DATA NO.	ITEM	Switch setting and function				Initial setting								Remarks
			1		0		DE	AT	CH	NL	IT	BE	SE	ES	
SW I E2	1	Reserved					0								
	2	Reserved					0								
	3	Reserved					0								
	4	Reserved					0								
	5	Reserved					0								
	6	Reserved					0								
	7	Reserved					0								
	8	Reserved					0								
SW I F1	1	DTMF detection time		50ms	80ms	100ms	120ms								
	2		No. 1	0	0	1	1	0							
	3	Protection of remote reception (5XX) detect	Yes		No			0							OPTION
	4	Remote reception with GE telephone	Compatible		Not compatible			1							
	5	Remote operation code figures by external TEL (0~9)	Binary input				0								
	6		No. = 8 4 2 1				1								
	7		5 6 7 8				0								
	8		0 1 0 1 (5XX)				1								OPTION
SW I F2	1	CNG detection in STAND-BY mode	Yes		No			1							OPTION
	2	Number of CNG detect (AM mode)		1pulse	2pulses	3pulses	4pulses								
	3		No. 2	0	0	1	1	0							
	4	Number of CNG (STAND-BY mode)		1pulse	2pulses	3pulses	4pulses								
	5		No. 4	0	0	1	1	0							
	6	Reserved						0							
	7	Reserved						0							
	8	Reserved						0							
SW I G1	1	Quiet detect time	Binary input				0								
	2		No. = 8 4 2 1				1								
	3		1 2 3 4				1								
	4		0 1 0 0 (4sec)				0								OPTION
	5	Quiet detect start timing	Binary input				0								
	6		No. = 8 4 2 1				0								
	7		5 6 7 8				0								
	8		0 1 0 1 (5sec)				0								OPTION
SW I G2	1	Off hook hold (Used in answering machine mode)	Binary input				0								
	2		No. = 128 64 32 16 8 4 2 1				0								
	3		1 2 3 4 5 6 7 8				0								
	4		0 0 0 0 0 0 0 0				0								
	5		(0sec=No limit)				0								
	6						0								
	7						0								
	8						0								OPTION
SW I G3	1	OGM detect timer (Used in answering machine mode)		Not Work	100ms	200ms	300ms								
	2		No. 1	0	0	1	1	0							
	3		No. 2	0	1	0	1	1							
	4	Connection select in AM mode	Parallel connect		External jack connect			0							
	5	Reserved						0							
	6	Section time of quiet detection		30s	40s	50s	60s								
	7		No. 5	0	0	1	1	0							
	8	Reserved						0							

SW NO.	DATA NO.	ITEM	Switch setting and function					Initial setting							Remarks	
			1		0			DE	AT	CH	NL	IT	BE	SE		ES
SW I H1	1	Busy tone detection ON/OFF time (Lower duration)	350ms		200ms			0								
	2	Busy tone detection ON/OFF time (Upper duration)	650ms		900ms			0								
	3	Reserved						0								
	4	Busy tone continuous sound detect time	5s		10s			1								
	5	Reserved						0								
	6	Busy tone detect continuation sound detect	No		Yes			0								
	7	Reserved						0								
	8	Busy tone detect intermittent sound detect	No		Yes			0								
SW I H2		Busy tone detection pulse number		2pulses	4pulses	6pulses	10pulses									
	1		No. 1	0	0	1	1	0								
	2		No. 2	0	1	0	1	1								
	3	Fax switching when A.M. full	Yes		No			0								OPTION
	4	Reserved						0								
	5	Reserved						0								
	6	Reserved						0								
	7	Reserved						0								
	8	Reserved						0								
SW I I1	1	Reserved						0								
	2	Reserved						0								
	3	Reserved						0								
	4	Reserved						0								
	5	Reserved						0								
	6	Reserved						0								
	7	Reserved						0								
	8	Reserved						0								
SW I I2	1	Reserved						0								
	2	Reserved						0								
	3	Reserved						0								
	4	Reserved						0								
	5	Reserved						0								
	6	Reserved						0								
	7	Reserved						0								
	8	Reserved						0								
SW I I3	1	Reserved						0								
	2	Reserved						0								
	3	Reserved						0								
	4	Reserved						0								
	5	Reserved						0								
	6	Reserved						0								
	7	Reserved						0								
	8	Reserved						0								
SW I I4	1	Reserved						0								
	2	Reserved						0								
	3	Reserved						0								
	4	Reserved						0								
	5	Reserved						0								
	6	Reserved						0								
	7	Reserved						0								
	8	Reserved						0								

SW NO.	DATA NO.	ITEM	Switch setting and function						Initial setting							Remarks	
			1			0			DE	AT	CH	NL	IT	BE	SE		ES
SW I I5	1	Reserved							0								
	2	Reserved							0								
	3	Reserved							0								
	4	Reserved							0								
	5	Reserved							0								
	6	Reserved							0								
	7	Reserved							0								
	8	Reserved							0								
SW I I6	1	Reserved							0								
	2	Reserved							0								
	3	Reserved							0								
	4	Reserved							0								
	5	Reserved							0								
	6	Reserved							0								
	7	Reserved							0								
	8	Reserved							0								
SW I I7	1	Reserved							0								
	2	Reserved							0								
	3	Reserved							0								
	4	Reserved							0								
	5	Reserved							0								
	6	Reserved							0								
	7	Reserved							0								
	8	Reserved							0								
SW I J1	1	Activity report print	Automatic printout			No printout when memory full			0							OPTION	
	2	Total communication hours and pages print	No			Yes			0								
	3	Sender's phone number setting	Cannot change			Change allowed			0								
	4	Reserved							0								
	5	Reserved							0								
	6	Summer time setting	No			Yes			0								
	7	Reserved							0								
	8	Reserved							0								
SW I J2	1	Reserved							0								
	2	Reserved							0								
	3	Polling key	Yes			No			0							OPTION	
	4	Reserved							0								
	5	Reserved							0								
	6	Reserved							0								
	7	Reserved							0								
	8	Reserved							0								
SW I J3	1	Automatic cover sheet	Yes			No			0							OPTION	
	2	Communication results printout (Transaction report)		E/T/M	Send only	Always	No print	Err only	1							OPTION	
	3		No. 4	0	0	0	0	1									
	4		No. 5	0	0	1	1	0									
	4		No. 6	0	1	0	1	0									
	5	Reserved							0								
	6	Reserved							0								
	7	Reserved							0								
8	Reserved							0									

SW NO.	DATA NO.	ITEM	Switch setting and function					Initial setting								Remarks
			1		0			DE	AT	CH	NL	IT	BE	SE	ES	
SW I K1	1	Entering DIAG mode by pressing SPEED key	Yes		No			0								
	2	Reserved						0								
	3	Reserved						0								
	4	Reserved						0								
	5	Reserved						0								
	6	Reserved						0								
	7	Reserved						0								
	8	Reserved						0								
SW I L1	1	Reserved						0								
	2	Reserved						0								
	3	Reserved						0								
	4	Reserved						0								
	5	Cut off mode (COPY mode)	Yes		No			1								OPTION
	6	A4 paper enable	Enable		Disable			1								
	7	LEGAL & LETTER paper enable	Enable		Disable			0								
	8	2 IN 1 Mode	Yes		No			0								OPTION
SW I L2	1	Paper set size		LETTER	LEGAL	A4	LETTER	1								
			No. 1	0	0	1	1									
			No. 2	0	1	0	1									
	3	Automatic reduce of receive	Auto		100 %			1								OPTION
	4	Paper type	High quality		Regular			0								OPTION
	5	Reserved						0								
	6	Reserved						0								
	7	Reserved						0								
	8	Reserved						0								

• Soft switch function description

SW-A1 No. 1 Protect from echo

Used to protect from echo in reception.

SW-A1 No. 2 Forced 4800BPS reception

When line conditions warrant that receptions take place at 4800 BPS repeatedly.

It may improve the success of receptions by setting at 4800BPS.

This improve the receiving document quality and reduces handshake time due to fallback during training.

SW-A1 No. 3 Footer print

When set to "1", the date of reception, the sender machine No., and the page No. are automatically recorded at the end of reception.

SW-A1 No. 4 Length limitation of copy/send/receive

Used to set the maximum page length.

To avoid possible paper jam, the page length is normally limited to 1 meter for copy or transmit, and 1.5 meters for receive.

It is possible to set it to "No limit" to transmit a long document, such as a computer print form, etc. (In this case, the receiver must also be set to no limit.)

SW-A1 No. 5 CSI transmission

(CSI TRANSMISSION) is a switch to set whether the machine sends or does not send the signal (CSI signal) informing its own telephone No. to the remote fax. machine when information is received. When "nonsending" is set, the telephone No. is not output on the remote transmitting machine if the remote transmitting machine has the function to display or print the telephone No. of receiving machine, using this CSI signal.

SW-A1 No. 6 DIS receive acknowledgment during G3 transmission

Used to make a choice of whether reception of DIS (NSF) is acknowledged after receiving two DISs (NSFs) or receiving one DIS (two NSF).

It may be useful for overseas communication to avoid an echo suppression problem, if set to 1.

SW-A1 No. 7 Non-modulated carrier for V29 transmission modem

Though transmission of a non-modulated carrier is not required for transmission by the V29 modem according to the CCITT recommendation, it may be permitted to a send non-modulated carrier before the image signal to avoid an echo suppression problem. It may be useful for overseas communication to avoid an echo suppression problem, if set to 1.

SW-A1 No. 8 EOL (End Of Line) detect timer

Used to make a choice of whether to use the 25-second or 13-second timer for detection of EOL.

This is effective to override communication failures with some facsimile models that have longer EOL detection.

SW-A2 No. 1 ~ No. 4 Modem speed

Used to set determine the initial modem speed. The default is 9600BPS.

It may be necessary to program it to a slower speed when frequent line fallback is encountered, in order to save the time required for fallback procedure.

SW-A2 No. 5 Sender's information transmit

(SENDER'S INFORMATION TRANSMISSION) is a switch to set the function to print the content of HEADER PRINT described in the passcode list at the front end of receiver's original when original is sent to the remote machine.

If this switch is set to "NO", the HEADER PRINT is not output at the receiving machine.

SW-A2 No. 6 Reserved

Set to "0".

SW-A2 No. 7 Communication error treatment in RTN sending mode (Reception)

Used to determine communication error treatment when RTN is sent by occurrence of a received image error in G3 reception. When it is set to "1", communication error is judged as no error.

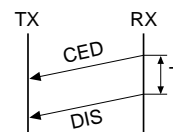
SW-A2 No. 8 CNG transmission

When set to "0", this model allows CNG transmission by pressing the Start key in the key pad dialing mode. When set to "1", CNG transmission in the key pad dialing mode cannot be performed. In either case, CNG transmission can be performed in the auto dial mode.

SW-A3 No. 1, No. 2 CED tone signal interval

For international communication, the 2100Hz CED tone may act as an echo suppression switch, causing a communication problem.

Though SW-A3 No. 1 and No. 2 are normally set to 0, it should be changed this time between the CED tone signal to eliminate the communication problem caused by echo.



SW-A3 No. 3 MR Coding

MR Coding is enable.

SW-A3 No. 4 ECM mode

Used to determine ECM mode function. Refer to following table.

SW-A3 No. 4 ECM MODE		0	0	1	1
SW-A3 No. 5 ECM MMR MODE		0	1	0	1
Compression method	ECM MMR mode	Yes	No	No	No
	ECM MH mode	Yes	Yes	No	No
	MR Mode	Yes	Yes	Yes	Yes

(Depending on remote machine)

SW-A3 No. 5 ECM MMR mode

See SW-A3 No. 4.

SW-A3 No. 6 ~ No. 8 Reserved

Set to "0".

SW-A4 No. 1 ~ No. 5 Signal transmission level

Used to control the signal transmission level in the range of 0dB to -31dB. The factory setting is at -8dB (MODEM output).

SW-A4 No. 6 Protocol monitor (Error print)

If set to "1", protocol is printed at communication error.

SW-A4 No. 7 Protocol monitor

Normally set to "0". If set to "1", communication can be checked, in case of troubles, without using a G3 tester or other tools.

When communication FSK data transmission or reception is made, the data is taken into the buffer. When communication is finished, the data is analyzed and printed out. When data is received with the line monitor (SW-A4 No. 8) set to "1" the reception level is also printed out.

SW-A4 No. 8 Line monitor

Normally set to "0". If set to "1", the transmission speed and the reception level are displayed on the LCD. Used for line tests.

SW-A5 No. 1, No. 2 Digital line equalization setting (Reception)

Line equalization when reception is to be set according to the line characteristics.

Setting should be made according to distance between the telephone and the telephone company central switching station.

SW-A5 No. 3 ~ No. 6 Reserved

Set to "0".

SW-A5 No. 7 Error criterion

Used to select error criterion for sending back RTN when receiving image data.

SW-A5 No. 8 Anti junk fax check

When use the Anti junk fax function, set to "1".

SW-A6 No. 1 Auto gain control (MODEM)

When this mode is enabled, if the reception signal level is under 31dBm. The modem itself controls the signal gain automatically.

SW-A6 No. 2 End buzzer

Setting this bit to 0 will disable the end buzzer (including the error buzzer/on-hook buzzer).

SW-A6 No. 3 Disconnect the line when DIS is received in RX mode

Bit1= 0: When DIS signal is received during RX mode, the line is disconnected immediately.

Bit1= 1: When DIS signal is received during RX mode, the line is disconnected on the next tone.

SW-A6 No. 4 Equalizer freeze control (MODEM)

This switch is used to perform reception operation by fixing the equalizer control of modem for the line which is always in an unfavorable state and picture cannot be received.

* Usually, the control is executed according to the state of line where the equalizer setting is changed always.

SW-A6 No. 5 Equalizer freeze control 7200BPS only

Setting which specifies SW-A3 No. 6 control only in the condition of 7200BPS modem speed.

SW-A6 No. 6 ~ No. 8 Reserved

Set to "0".

SW-B1 No. 1 ~ No. 4 Reserved

Set to "0".

SW-B1 No. 5 ~ No. 8 Recall times

Choice is made as to how many redials should be.

SW-B2 No. 1 Dialing pause (sec/pause)

Pauses can be inserted between telephone numbers of direct dial connection. Selection of 4 sec or 2 sec pause is available.

SW-B2 No. 2 Dial tone detection (before auto dial)

Used to set YES/NO of dial tone detection in auto dialing.

SW-B2 No. 3 Line current detection (before auto dial)

Used to set YES/NO of line current detection in auto dialing.

SW-B2 No. 4 Busy tone detection (after auto dial)

Used to set busy tone detection in auto dialing.

SW-B2 No. 5 Waiting time after dialing

This is time waiting for the opponent's signals after dialing.

For the Switzerland version, the time is fixed to 90 seconds regardless of this switch setting.

SW-B2 No. 6 Reserved

Set to "0".

SW-B2 No. 7 Reserved

Set to "0".

SW-B2 No. 8 PBX connection

Used to select according to the connected line: PBX (Private Branch Exchange)

SW-B3 No. 1, No. 2 PBX recall function (R key select)

Used to set the operation mode of PBX recall when the R key is pressed. Setting is made according to the type of PBX

No. 1=1, No. 2=1: Time break recall(=Flash) is performed. The DPON on the LIU board is driven to initiate recall.

No. 1=1, No. 2=0: Earth recall is performed. The E-relay on the LIU board is driven to initiate recall.

SW-B3 No. 3 Reserved

Set to "0".

SW-B3 No. 4, No. 5 PBX select

Used to select the operation mode of PBX recall in auto dialing.

No. 4=1, No. 5=1: Time break recall(=Flash) is performed before dialing. The DPON on the LIU is driven to initiate recall.

No. 4=1, No. 5=0: Earth recall is performed before dialing. The E-relay on the LIU is driven to initiate recall.

No. 4=0, No. 5=0: The PBX ID digit is automatically added when dialing to external line. PBX ID is up to 3 digits and entered in Option settings mode.

SW-B3 No. 6 ~ No. 8 Reserved

Set to "0".

SW-B4 No. 1, No. 2 Reserved

Set to "0".

SW-B4 No. 3 Dial mode

When using the pulse dial, set to 1. When using the tone dial, set to 0.

SW-B4 No. 4 Pulse → Tone change function by ✕ key

When setting to 1, the mode is changed by pressing the ✕ key from the pulse dial mode to the tone dial mode.

SW-B4 No. 5 ~ No. 8 Reserved

Set to "0".

SW-B5 No. 1 ~ No. 5 DTMF signal transmission level (Low)

The transmission level of DTMF signal is adjusted. (lower frequency)

00000: 0dBm

↓

11111: -15.5dBm (-0.5dBm x 31)

SW-B5 No. 6 ~ No. 8 Reserved

Set to "0".

SW-B6 No. 1 ~ No. 5 DTMF signal transmission level (High)

The transmission level of DTMF signal is adjusted. (higher frequency)

00000: 0dBm

↓

11111: -15.5 dBm (-0.5dBm x 31)

SW-B6 No. 6 ~ No. 8 Reserved

Set to "0".

SW-C1 No. 1, No. 2 Reading slice (Binary)

Used to determine the set value of reading density in standard/fine mode. The standard setting is "00" (Factory setting is "00")

SW-C1 No. 3, No. 4 Reading slice (Half tone)

Used to determine the set value of reading density in half tone mode. The standard setting is "00" (Factory setting is "00")

SW-C1 No. 5 Line density selection

Used to set the transmission mode which is automatically selected when the Resolution key is not pressed. In the copy mode, however, the fine mode is automatically selected unless the Resolution key is manually set to another mode.

SW-C1 No. 6 ~ No. 8 Reserved

Set to "0".

SW-D1 No. 1 ~ No. 4 Number of rings for auto receive

When the machine is set in the auto receive mode, the number of rings before answering can be selected. It may be set from one to four rings using a binary number. Since the facsimile telephone could be used as an ordinary telephone if the handset is taken off the hook, it should be programmed to the user's choice. If the soft switch was set to 1, direct connection is made to the facsimile. If a facsimile calling beep was heard when the handset is taken off the hook, press the START key and put the handset on the hook to have the facsimile start receiving. If it was set to 0 accidentally, receive ring is set to 1.

NOTE: If the machine is set to answer after a large number of rings, it may not be able to receive faxes successfully. If you have difficulty receiving faxes, reduce the number of rings to a maximum of 6.

SW-D1 No. 5 Automatic switching manual to auto receive mode

This soft switch is used to select whether the machine should switch to the auto receive mode after 5 rings in the manual receive mode or remain in the same way as SW-D1 No. 1, No. 2, No. 3 and No. 4 "0"1"0"1"(5 rings).

SW-D1 No. 6 Reserved

Set to "0".

SW-D1 No. 7 CI detection

Detection frequency of ring signal for auto reception is set. When set to 1, frequency is set to 13Hz or more.

When set to 0, frequency is set to PTT standards.

SW-D1 No. 8 Reserved

Set to "0".

SW-D2 No. 1 ~ No. 8 Reserved

Set to "0".

SW-E1 No. 1 ~ No. 8 Reserved

Set to "0".

SW-E2 No. 1 ~ No. 8 Reserved

Set to "0".

SW-F1 No. 1, No. 2 DTMF detect time

Used to set detect time of DTMF (Dual Tone Multi Frequency) used in remote reception (5 × ×).

The longer the detect time is, the less the error detection is caused by noises.

SW-F1 No. 3 Protection of remote reception (5 × ×) detect

Used to set the function of remote reception (5 × ×). When set to "1", the remote reception function is disabled.

SW-F1 No. 4 Remote reception with GE telephone

(Corresponding to TEL made by GE) P. B. X.

"1": Compatible with TEL mode by GE

"0": Not compatible

- When sending (5 × ×) for remote reception with a GE manufactured telephone remote reception may not take place because of special specifications in their DTMF. To overcome this, a soft SW is provided to change the modem setting to allow for remote reception.
- If this soft SW is set to "1", other telephone sets may be adversely affected.

SW-F1 No. 5 ~ No. 8 Remote operation code figures by external TEL (0 ~ 9)

Remote operation codes can be changes from 0 through 9. If set to greater than 9, it defaults to 9. The "5 × × " is not changed.

Ex-7 × × (Default: 5 × ×)

SW-F2 No. 1 CNG detection in STAND-BY mode

When setting to "1", the CNG signal detection function during standby stops.

SW-F2 No. 2, No. 3 Number of CNG detect (AM mode)

Used for detection of CNG in 1 to 4 pulses.

SW-F2 No. 4, No. 5 Number of CNG (STAND-BY mode)

Used for detection of CNG in 1 to 4 pulses.

SW-F2 No. 6 ~ No. 8 Reserved

Set to "0".

SW-G1 No. 1 ~ No. 4 Quiet detect time

When an answering machine is connected, if a no sound state is detected for a certain period of time, the machine judges it as a transmission from a facsimile machine and automatically switches to the FAX mode.

SW-G1 No. 5 ~ No. 8 Quiet detect start timing

Inserts a pause before commencing quiet detection.

SW-G2 No. 1 ~ No. 8 Off hook hold (Used in answering machine mode)

Used to set Off hook hold time by binary input.

(0 to 255 seconds)

SW-G3 No. 1, No. 2 OGM detect timer (Used in answering machine mode)

AM mode is working after detecting OGM of answering machine. This is used to change the detection of OGM or cancel to detect the OGM.

SW-G3 No. 3 Connection select in AM mode

This is selection how to enter to AM mode. If selected 0, AM mode is working after detecting Answering machine hook-up.

If selected 1, AM mode is working after detecting OGM of Answering machine.

SW-G3 No. 4 Reserved

Set to "0".

SW-G3 No. 5, No. 6 Section time of quiet detection

The switch which sets the time from the start of detection function to the end of the function.

SW-G3 No. 7, No. 8 Reserved

Set to "0".

SW-H1 No. 1 Busy tone detection ON/OFF time (Lower duration)

The initial value of detection is set according to electric condition.

The set value is changed according to the local switch board. (Erroneous detection of sound is reduced.)

Normally the upper limit is set to 750msec, and the lower limit to 200msec.

If erroneous detection is caused by sound, etc., adjust the detection range.

The lower limit can be set in the range of 350msec to 200msec.

SW-H1 No. 2 Busy tone detection ON/OFF time (Upper duration)

Similarly to SW-H1 No. 1, the set value can be varied.

The upper limit can be set in the range of 650msec to 750msec.

SW-H1 No. 1	SW-H1 No. 2	Detection range
0	0	200msec ~ 750msec
0	1	200msec ~ 650msec
1	0	350msec ~ 750msec
1	1	350msec ~ 650msec

SW-H1 No. 3 Reserved

Set to "0".

SW-H1 No. 4 Busy tone continuous sound detect time

Set detecting time busy tone for 5 seconds or as is PTT.

SW-H1 No. 5 Reserved

Set to "0".

SW-H1 No. 6 Busy tone detect continuation sound detect

Used to select detection of the continuous sound of certain frequency.

SW-H1 No. 7 Reserved

Set to "0".

SW-H1 No. 8 Busy tone detect intermittent sound detect

Used to select detection of the intermittent sound of certain frequency.

SW-H2 No. 1, No. 2 Busy tone detection pulse number

Used to set detection of Busy tone intermittent sounds.

SW-H2 No. 3 Fax switching when A.M. full

Used to disable or enable the function of OFF-HOOK hold.

If the answering machine's memory (tape) is full and there is no response, the machine automatically switches to Fax reception.

The OFF HOOK hold time (Answering machine operating time) is set by normal operation.

SW-H2 No. 4 ~ No. 8 Reserved

Set to "0".

SW-I1 No. 1 ~ No. 8 Reserved

Set to "0".

SW-I2 No. 1 ~ No. 8 Reserved

Set to "0".

SW-I3 No. 1 ~ No. 8 Reserved

Set to "0".

SW-I4 No. 1 ~ No. 8 Reserved

Set to "0".

SW-I5 No. 1 ~ No. 8 Reserved

Set to "0".

SW-I6 No. 1 ~ No. 8 Reserved

Set to "0".

SW-I7 No. 1 ~ No. 8 Reserved

Set to "0".

SW-J1 No. 1 Activity report print

This soft switch is used to select: whether or not to print out the activity report when the memory is full. An activity report can be printed when the following key entry command is made.

"FUNCTION", "2", "#", "START"

After producing the activity report, all the data in the memory will be cleared.

When the switch function is set to "0" (no), the data in the memory will be deleted from the oldest as it reaches the maximum memory capacity.

SW-J1 No. 2 Total communication hours and pages print

Used to make a choice of whether the total communication time and pages are recorded in the activity report.

SW-J1 No. 3 Sender's phone number setting

Used to make a choice of whether the registered sender's phone number can be changed or not. If the switch is set to "1", new registration of the sender's phone number is disabled to prevent accidental wrong input.

SW-J1 No. 4, No. 5 Reserved

Set to "0".

SW-J1 No. 6 Summer time setting

This is used to set YES/NO of automatic clock adjustment for European Summer time.

SW-J1 No. 7, No. 8 Reserved

Set to "0".

SW-J2 No. 1, No. 2 Reserved

Set to "0".

SW-J2 No. 3 Polling key

If this switch is set to 1, the last of Rapid key works as polling key.

SW-J2 No. 4 ~ No. 8 Reserved

Set to "0".

SW-J3 No. 1 Automatic cover sheet

The machine automatically generates a cover sheet and sends it as the last page of each transmission.

SW-J3 No. 2 ~ No. 4 Communication result printout (Transaction report)

Every communication, the result can be output. As usual, it is set to print the timer sending communication error alone. If No. 2: 0 No. 3: 1 No. 4: 0 are set, printing is always on (printed even if it is normally ended).

000: Error, timer and memory sending/receiving

001: Sending

010: Continuous printing

011: Not printed

100: Communication error

SW-J3 No. 5 ~ No. 8 Reserved

Set to "0".

SW-K1 No. 1 Entering DIAG mode by pressing SPEED key

A bit which is used in the production process only. When the SPEED key is pressed, the switch is changed from the stand-by state to the DIAG mode.

SW-K1 No. 2 ~ No. 8 Reserved

Set to "0".

SW-L1 No. 1 ~ No. 4 Reserved

Set to "0".

SW-L1 No. 5 Cut off mode (COPY mode)

Whether the excessive part is printed on the next recording paper or discarded is selected to copy a document which is longer than the recording paper.

SW-L1 No. 6 A4 Paper enable

The use of recording paper of A4 is enabled.

SW-L1 No. 7 LEGAL and LETTER paper enable

The use of recording paper of LEGAL and LETTER is enabled.

SW-L1 No. 8 2 IN 1 mode

A function to print transmitted data of two pages on one sheet.

SW-L2 No. 1, No. 2 Paper set size

At present size of the recording paper.

SW-L2 No. 3 Automatic reduce of receive

If set to 1, it is reduced automatically when receiving.

SW-L2 No. 4 Paper type

The type of the recording paper is set.

SW-L2 No. 5 ~ No. 8 Reserved

Set to "0".

[3] Troubleshooting

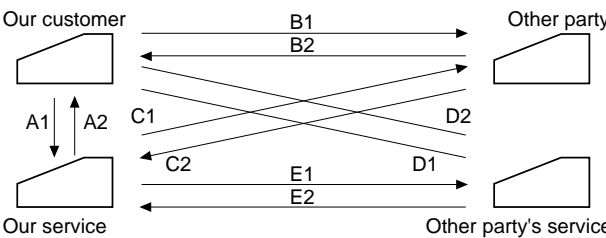
Refer to the following actions to troubleshoot any of problems mentioned in 1-4.

- [1] A communication error occurs.
- [2] Image distortion produced.
- [3] Unable to do overseas communication.
- [4] Communication speed slow due to FALLBACK.
 - Increase the transmission level SOFT SWITCH A4-1, 2, 3, 4, 5. May be used in case [1] [2] [3].
 - Decrease the transmission level SOFT SWITCH A4-1, 2, 3, 4, 5. May be used in case [3].

- Apply line equalization SOFT SWITCH A5-1, 2. May be used in case [1] [2] [3] [4].
- Slow down the transmission speed SOFT SWITCH A2-1, 2, 3, 4. May be used in case [2] [3].
- Replace the TEL/LIU PWB. May be used in all cases.
- Replace the control PWB. May be used in all cases.

* If transmission problems still exist on the machine, use the following format and check the related matters.

TO:	ATT:	Ref.No. :
CC:	ATT:	Date :
FM:		Dept :
		Sign :

***** Facsimile communication problem *****		Ref.No.:
From: Mr.	Fax Tel No.:	Date:
Our customer	Name	Tel No.
	Address	Fax No.
	Contact person	Model name
Other party	Name	Tel No.
	Address	Fax No.
	Contact person	Model name
Problem mode	Line: Domestic / international	Model: G3
	Reception / Transmission	Automatic reception / Manual reception
		Automatic dialing / Manual dialing / Others
Frequency:	%	ROM version:
Confirmation item		Please mark problem with an X. No problem is: 0.
		A1 A2 B1 B2 C1 C2 D1 D2 E1 E2
		Transmission level setting is () dB at our customer
		Transmission level () dBm Reception level () dBm By level meter at B1 and B2
Comment		
Countermeasure		
**** Please attach the G3 data and activity report on problem. ****		

* Please complete this report before calling the "TAC" hotline if problem still occurs.

[4] Error code table

1. Communication error code table

G3 Transmission

Code	Final received signal	Error Condition (Receiver side)
0	Incomplete signal frame	Cannot recognize bit stream after flag
1	NSF, DIS	Cannot recognize DCS signal by echo etc. Cannot recognize NSS signal (FIF code etc)
2	CFR	Disconnects line during reception (carrier missing etc)
3	FTT	Disconnects line by fall back
4	MCF	Disconnects line during reception of multi page Cannot recognize NSS, DCS signal in the case of mode change
5	PIP or PIN	The line is hung up without replying to telephone request from the receiving party.
6	RTN or RTP	Cannot recognize NSS, DCS signal after transmit RTN or RTP signal.
7	No signal or DCN	No response in receiver side or DCN signal received* (transmitter side)
8	–	Owing to error in some page the error could not be corrected although the specified number of error retransmission was attempted.
11	–	Error occurred after or while reception by the remote (receiving) machine was revealed to be impossible.
12	–	Error occurred just after fallback.
13	–	Error occurred after a response to retransmission end command was received.

G3 Reception

Code	Final received signal	Error Condition (Receiver side)
0	Incomplete signal frame	Cannot recognize bit stream after flag
1	NSS, DCS	Cannot recognize CFR or FTT signal Disconnects line during transmission (line error)
2	NSC, DTC	Cannot recognize NSS signal (FIF code etc)
3	EOP	Cannot recognize MCF, PIP, PIN, RTN, RTP signal
4	EOM	Cannot recognize MCF, PIP, PIN, RTN, RTP signal in the case of mode change
5	MPS	The line is hung up without replying to communication request.
6	PR1-Q	Cannot recognize PIP, PIN signal in the case of TALK request
7	No signal or DCN	No response in transmitter (cannot recognize DIS signal) or DCN signal received* (receiver side)
8	–	Error occurred upon completion of reception of all pages.
9	–	Error occurred when mode was changed or Transmission/Reception switching was performed.
10	–	Error occurred during partial page or physical page reception.
11	–	Error occurred after or during inquiry from the remote (transmitting) machine as to whether reception is possible or not.
12	–	Error occurred during or just after fallback.
13	–	Error occurred after the retransmission end command was received.

CHAPTER 3. MECHANISM BLOCKS

[1] General description

1. Document feed block and diagram

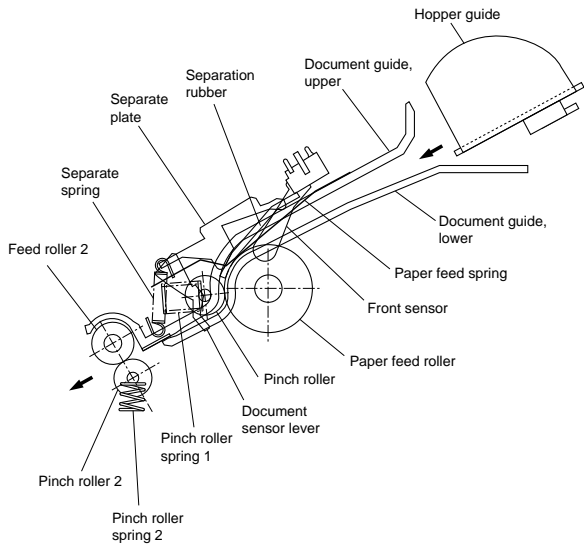


Fig. 1

2. Document feed operation

- 1) The original, which is set in the document hopper, feeds automatically when the front sensor is activated. This in turn activates the pulse motor which drives the document supply roller. The document stops when the lead edge is detected by the document sensor.
- 2) The lead edge of the original is fed a specified number of pulses after the lead edge of the document is detected for the reading process to begin.
- 3) The trailing edge of the original is fed a specific number of pulses after the trailing edge of the document deactivates the document sensor. The read process then stops and the original is discharged.
- 4) When the front sensor is in the OFF state (any document is not set up in the hopper guide), the drive will be stopped when the document is discharged.

3. Hopper mechanism

3-1. General view

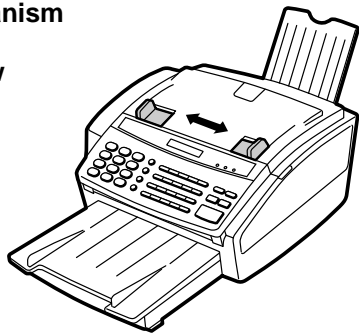


Fig. 2

The hopper section contains document guides that are used to adjust the hopper to the width of the original document. This ensures that the original feeds straight into the fax machine for scanning.
Document width: 148 mm to 216 mm (A5 longitudinal size to Letter longitudinal size)

NOTE: Adjust the document guide after setting up the document.

3-2. Automatic document feed

- 1) Use of the paper feed roller and separation rubber plate ensures error-free transport and separation of documents. The plate spring presses the document to the paper feed roller to assure smooth feeding of the document.
- 2) Document separation method: Separation rubber plate

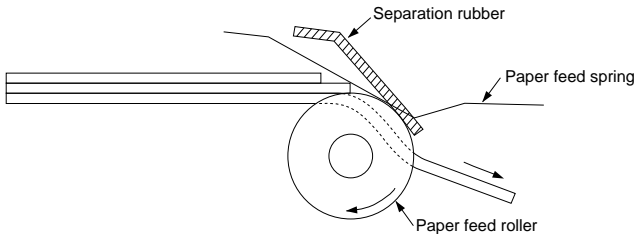


Fig. 3

3-3. Documents applicable for automatic feed

	4x6 series (788mm x 1091mm x 1000mm sheets)		Square meter series	
	Minimum	Maximum	Minimum	Maximum
Feeder capacity	20 sheets, max.			
Paper weight	45kg	64.3kg	52g/m ²	74.3g/m ²
Paper thickness (ref.)	0.06mm	0.09mm	0.06mm	0.09mm
Paper size	B6 (128mm x 182mm) ~ A4 (210mm x 297mm), Letter (216mm x 279mm)			

NOTE: Double-side coated documents and documents on facsimile recording paper should be inserted manually. The document feed quantity may be changed according to the document thickness.

Documents corresponding to a paper weight heavier than 64.3kg (74.3g/m²) and lighter than 135kg (157g/m²) are acceptable for manual feed.

Documents heavier than 135kg in terms of the paper weight must be duplicated on a copier to make it operative in the facsimile.

3-4. Loading the documents

- 1) Make sure that the documents are of suitable size and thickness, and free from creases, folds, curls, wet glue, wet ink, clips, staples and pins.
- 2) Place documents face down in the hopper.
 - i) Adjust the document guides to the document size.
 - ii) Align the top edge of documents and gently place them into the hopper. The first page under the stack will be taken up by the feed roller to get ready for transmission.

NOTES: 1) Curled edge of documents, if any, must be straighten out.

2) Do not load the documents of different sizes and/or thicknesses together.

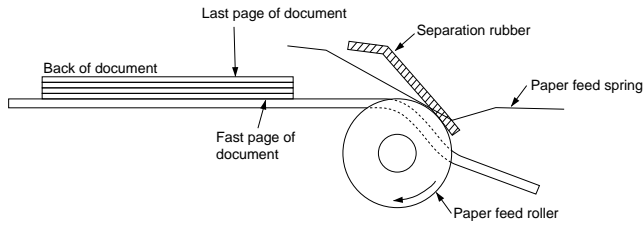


Fig. 4

3-5. Documents requiring use of document carrier

- 1) Documents smaller than B6 (128mm x 182mm).
- 2) Documents thinner than the thickness of 0.06mm.
- 3) Documents containing creases, folds, or curls, especially those whose surface is curled (maximum allowable curl is 5mm).
- 4) Documents containing tears.
- 5) Carbon-backed documents. (Insert a white sheet of paper between the carbon back and the document carrier to avoid transfer of carbon to the carrier.)
- 6) Documents containing an easily separable writing material (e.g., those written with a lead pencil).
- 7) Transparent documents.
- 8) Folded or glued documents.

Document in document carrier should be inserted manually into the feeder.

4. Document release

4-1. General

To correct a jammed document or to clean the document running surface, pull the operation panel lock lever under the front center of the operation panel. To open the upper document guide, the operation panel must be opened first.

5. Optical system

(1) General view

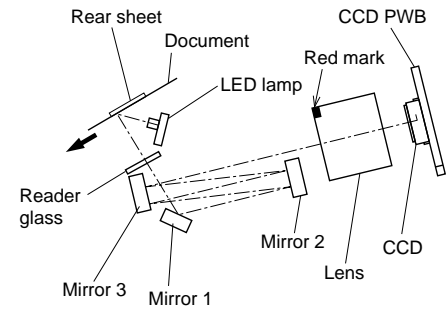


Fig. 5

(2) Composition

The optical system is composed of the document feed mechanism, the LED lamp, the reflecting mirrors, the focusing lens, the CCD sensor, and the read process circuit.

5-1. LED Lamp/Lens

The LED lamp is used to project light to the document.

NOTE: Take care for the position of the red mark on the lens. (Top of the light-projected side)

5-2. CCD

The CCD (charge coupled device) image sensor consists of a photodiode array which converts the intensity of light reflected from the document surface into series of analog voltages which are then stored in an analog shift register. The series of analog voltages are then converted into a digital equivalent by a black/white binary logic circuit.

(Example) Scan signal output waveform

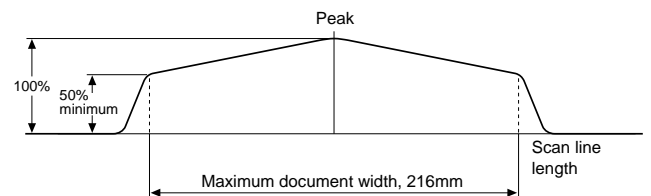


Fig. 6

- 1) The minimum output from the CCD at the maximum scan width of document (216mm) must be more than 50% of the peak value.
- 2) The peak output must be about 0.2 ~ 0.6 under room temperature to avoid CCD saturation.

6. Recording block

(1) General view

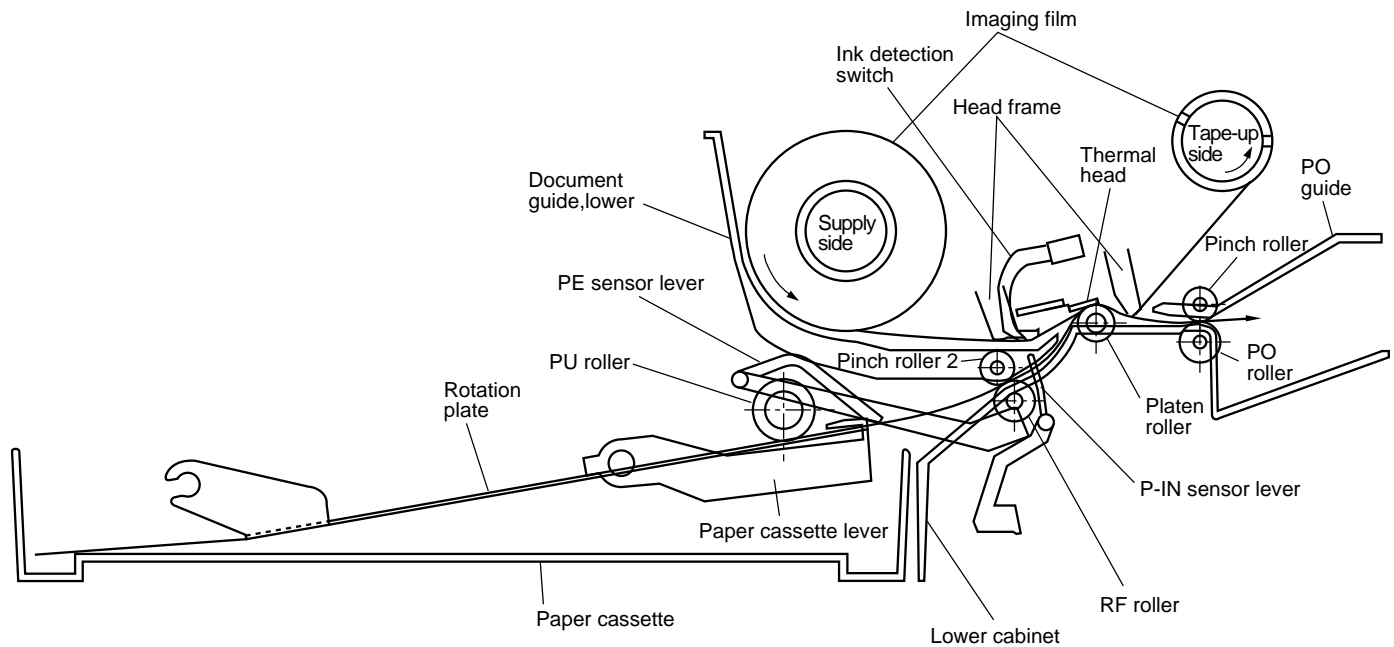


Fig. 7

6-1. Driving

In the drive mechanism, the rotating force of the pulse motor for both transmission and reception is transmitted to the paper supply roller, the recording paper feed roller and imaging film drive gear through the pulse motor axle gear, reduction gear and planetary gear.

6-2. Recording

This equipment employs the thermal transcription system which used the thermal head imaging film.

1) Thermal head

The thermal head is composed of 2,016 heating elements in traverse line, and the resolution power is 8 dots/mm. The maximum speed is 10 ms/line.

2) Structure of recording mechanism

Recording is achieved by applying a suitable pressure to the thermal head through the imaging film of the recording paper feed roller and the recording paper.

The main scanning is electronically done, and the sub-scanning is mechanically done (by sending the recording paper with the recording paper feed roller).

3) Recording paper transfer sequence

- The recording paper stored in the cassette is fed with the PU roller, and the recording paper is stopped when the PIN sensor is turned on by sensing its lead edge.
- Hereafter, the imaging film and recording paper are transferred with the recording paper feed roller, and thermal transcription is done on the recording paper.
- After thermal transcription, the imaging film is taken up by the roller on the take-up side, and the recording paper is discharged by the PO roller.

As basic, the density unevenness mainly results from the longitudinal misalignment of the thermal head to the heater line. Otherwise, the head is in uneven contact with the recording paper feed roller, or the imaging film is wrinkled.

The following items are described as the simplified checking method.

- Are the power and signal cables of the thermal head suitably treated?
- Does the same symptom appear even if the thermal head pressure spring is replaced?
- Is the feed roller of the recording paper concentric? (Density is uneven at intervals.)
- Does the same symptom appear even if the thermal head is replaced?
- Is the imaging film stained or wrinkled?

[2] Disassembly and assembly procedures

- This chapter mainly describes the disassembly procedures. For the assembly procedures, reverse the disassembly procedures.
- Easy and simple disassembly/assembly procedures of some parts and units are omitted. For disassembly and assembly of such parts and units, refer to the Parts List.
- The numbers in the illustration, the parts list and the flowchart in a same section are common to each other.
- To assure reliability of the product, the disassembly and the assembly procedures should be performed carefully and deliberately.

1

Bottom plate ass'y

a. Remove the bottom plate ass'y from the mechanism unit according to the flowchart.

No.	Part name	Q'ty
1	Mechanism unit	1
2	Screw (3×8)	5
3	Screw (4×6)	1
4	Earth cable	1
5	Connector	6
6	Bottom plate ass'y	1

1

2

3

4

5

6

6

Rib

Rib

Lower cabinet

2

2

2

2

2

2

6

6

1

5

5

5

5

5

5

3

4

6

TEL/LIU PWB

CONTROL PWB

POWER SUPPLY PWB

Fig. 1

2 Top cover and paper out guide unit

- a. Remove the bottom plate ass'y from the mechanism unit according to procedure 1-a.
- b. Remove the top cover and paper out guide unit from the mechanism unit according to the flowchart.

Parts list (Fig. 2)

No.	Part name	Q'ty
1	Mechanism unit	1
2	Screw (3×6)	1
3	Pinion gear	1
4	Hopper spring	1
5	Hopper guide, left	1
6	Hopper guide, right	1
7	Top cover	1
8	Screw (3×8)	2
9	Screw (3×12)	4
10	Paper out guide unit	1

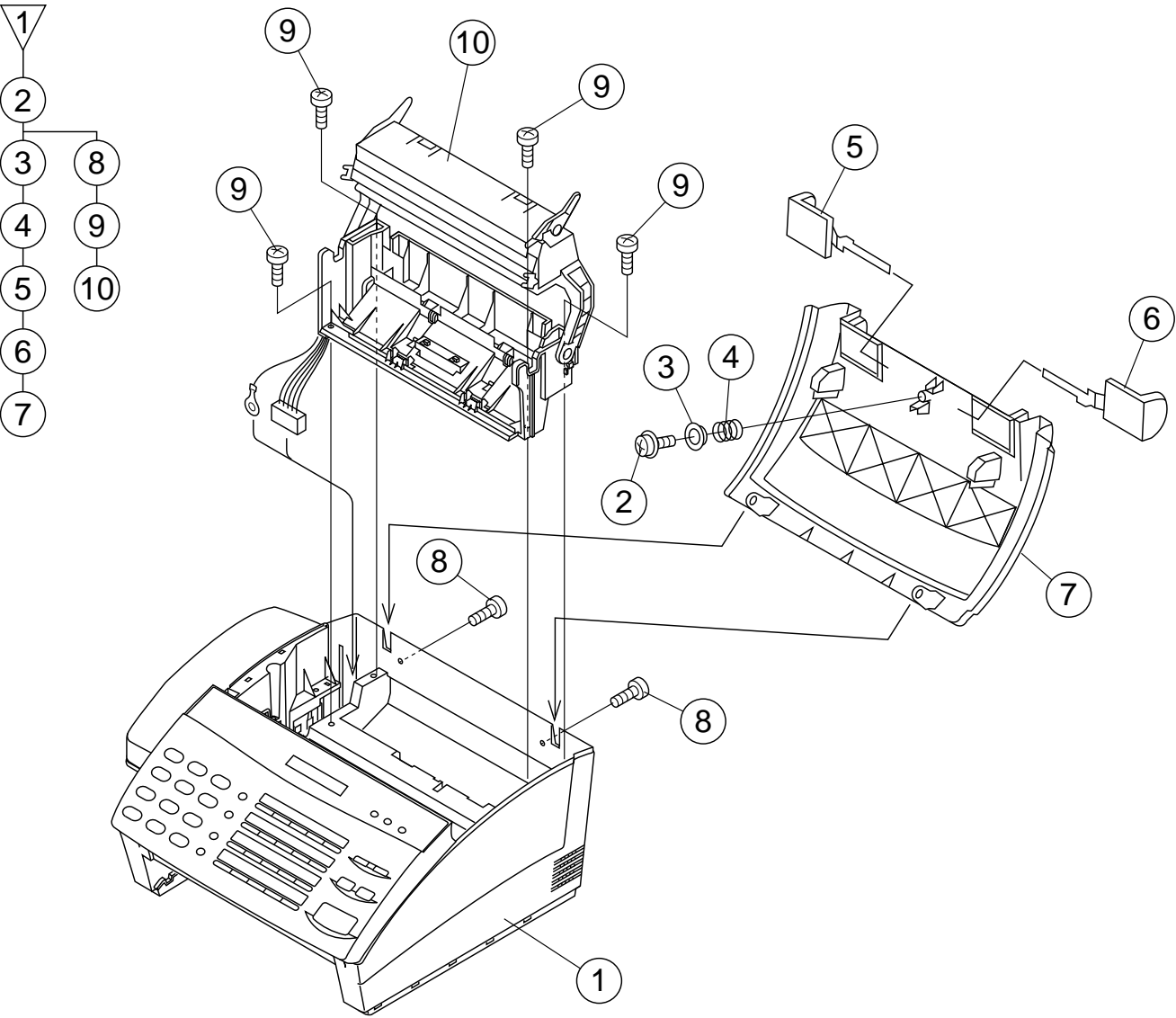


Fig. 2

3 Paper out guide and head frame unit

- Remove the bottom plate ass'y from the mechanism unit according to procedure 1-a.
- Remove the top cover and paper out guide unit from the mechanism unit according to procedure 2-b.
- Remove the paper out guide and head frame unit from the paper out guide unit according to the flowchart.

Parts list (Fig. 3)

No.	Part name	Q'ty
1	PO pinch roller spring	2
2	PO pinch roller	2
3	Arm up spring	2
4	Head frame unit	1
5	Paper out guide	1

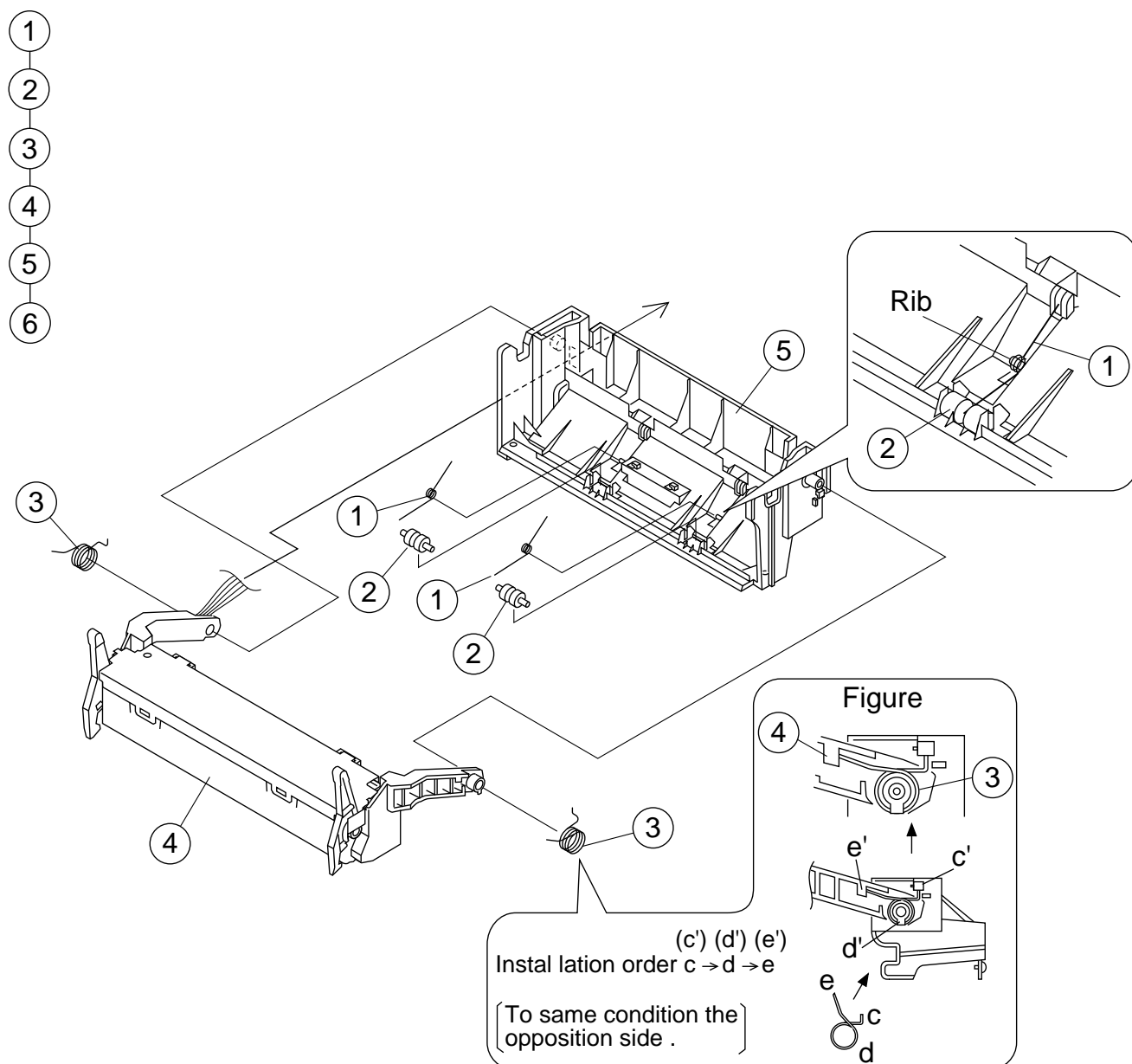


Fig. 3

4 Head frame and thermal head

- a. Remove the bottom plate ass'y from the mechanism unit according to procedure 1-a.
- b. Remove the top cover and paper out guide unit from the mechanism unit according to procedure 2-b.
- c. Remove the paper out guide and head frame unit from the paper out guide unit according to the 3-c.
- d. Remove the head frame and thermal head from the head frame unit according to the flowchart.

Parts list (Fig. 4)

No.	Part name	Q'ty	No.	Part name	Q'ty
1	Head frame unit	1	12	Thermal head unit	1
2	Screw (3×8)	1	13	Head spring B	1
3	Earth cable	1	14	Head spring A	4
4	Head frame cover	1	15	Head spring C	1
5	Lock lever spring, left	1	16	Head frame	1
6	Lock lever, left	1	17	Connector	1
7	Lock lever spring, right	1	18	Screw (2.6×5)	1
8	Lock lever, right	1	19	Head guide, right	1
9	Connector	1	20	Screw (2.6×5)	1
10	Ink switch	1	21	Head guide, left	1
11	Screw (3×5)	1	22	Head guide sheet	1
			23	Thermal head	1

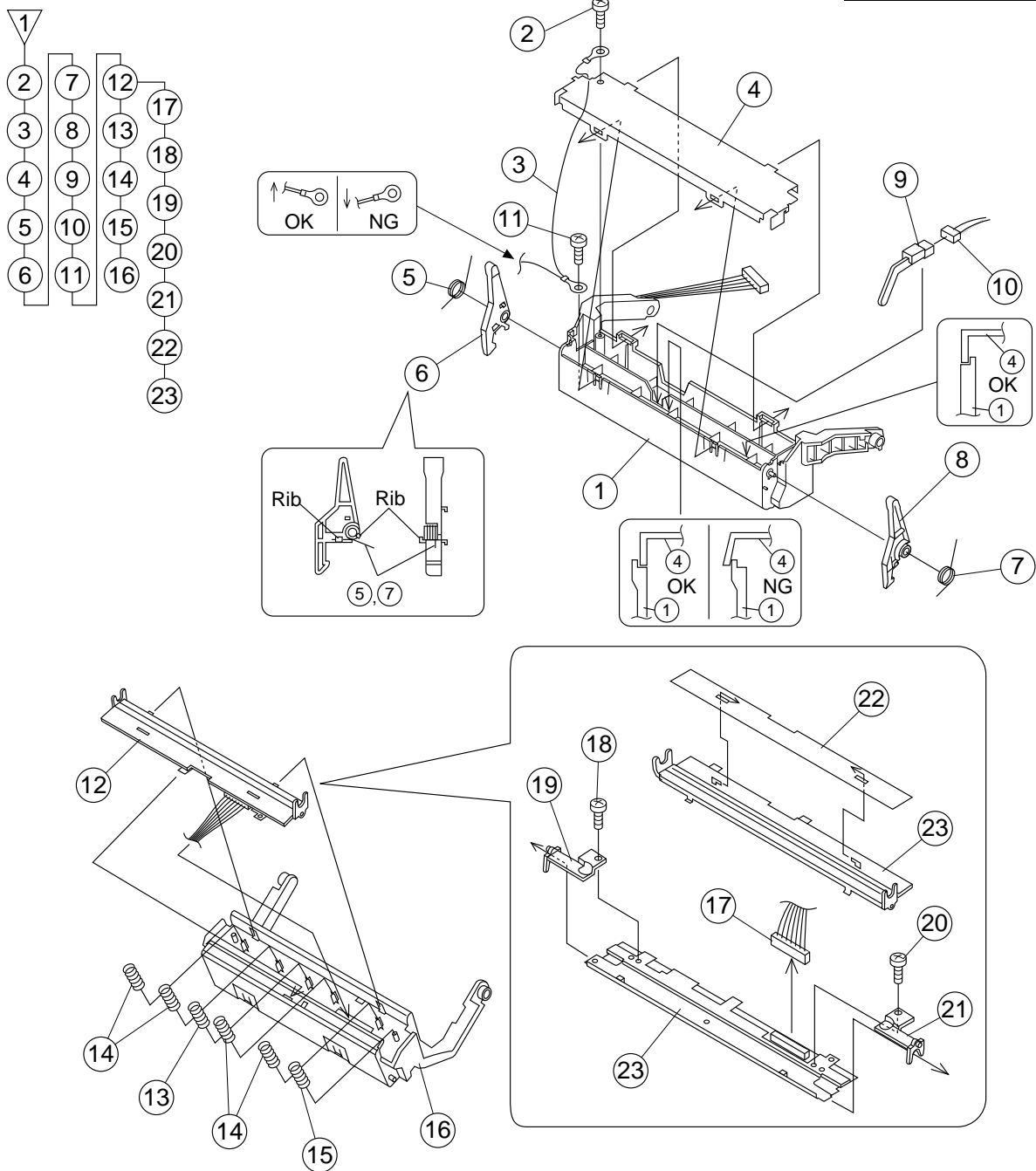


Fig. 4

5 Operation panel unit and document guide lower

- Remove the bottom plate ass'y from the mechanism unit according to procedure 1-a.
- Remove the top cover and paper out guide unit from the mechanism unit according to procedure 2-b.
- Remove the operation panel unit and document guide lower from the mechanism unit according to the flowchart.

Parts list (Fig. 5)

No.	Part name	Q'ty	No.	Part name	Q'ty
1	Mechanism unit	1	9	Document guide lower unit	1
2	Screw (3×8)	1	10	Feed gear ass'y	1
3	Stopper plate	1	11	Feed roller	1
4	Connector	1	12	PO pinch roller	2
5	Operation panel unit	1	13	PF pinch roller spring	2
6	Screw (3×12)	1	14	Document guide lower	1
7	Drive unit cover	1			
8	Screw (3×8)	5			

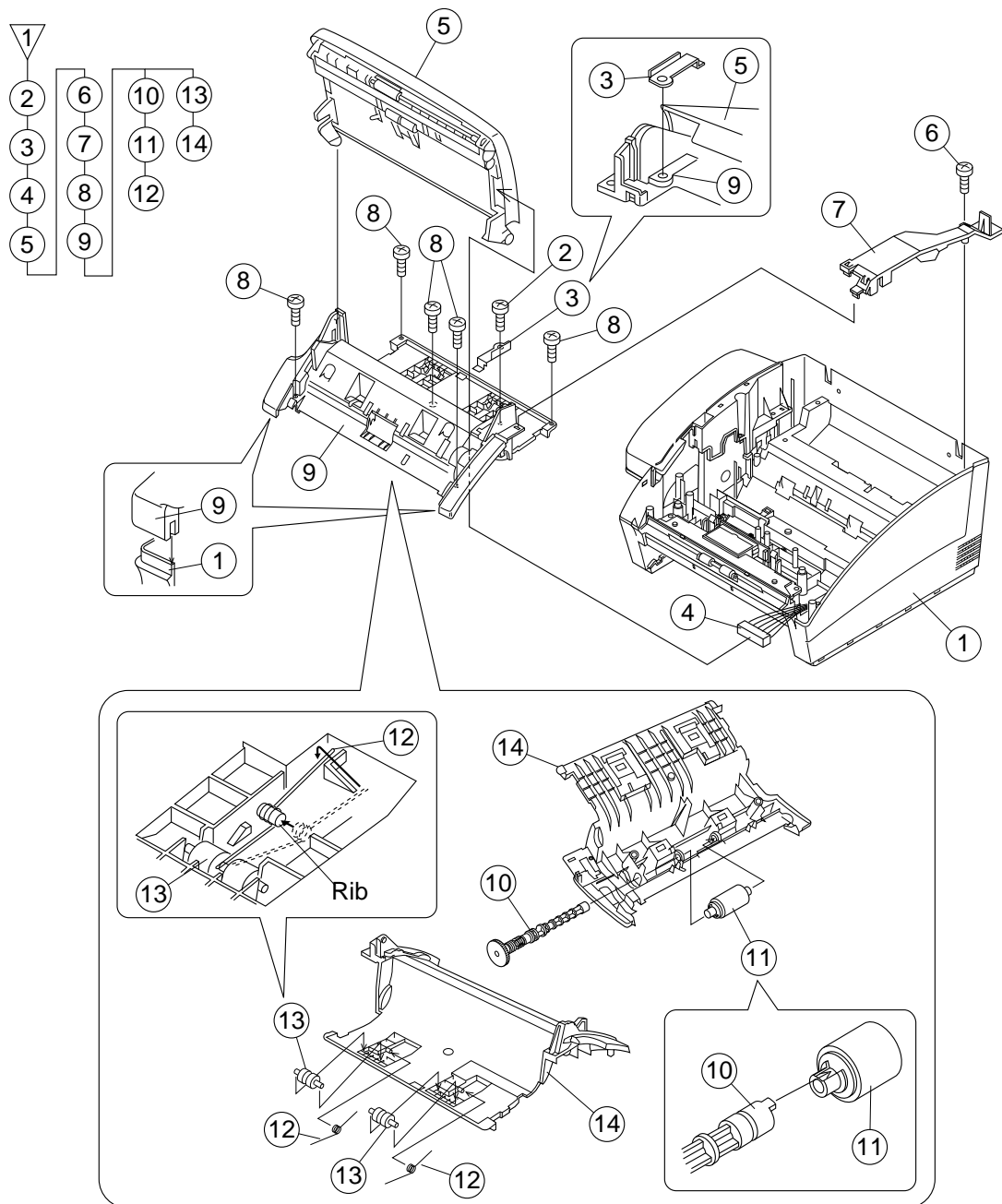


Fig. 5

6 Document guide upper

- a. Remove the bottom plate ass'y from the mechanism unit according to procedure 1-a.
- b. Remove the top cover and paper out guide unit from the mechanism unit according to procedure 2-b.
- c. Remove the operation panel unit document guide lower from the mechanism unit according to procedure 5-c.
- d. Remove the document guide upper from the operation panel unit according to the flowchart.

Parts list (Fig. 6)

No.	Part name	Q'ty	No.	Part name	Q'ty
1	Operation panel unit	1	12	Separate spring	1
2	Screw (3×8)	2	13	Separate plate	1
3	Document guide upper unit	1	14	Separation rubber	1
4	Panel lock lever spring	1	15	Feed spring	1
5	Panel lock lever	1	16	Pinch roller shaft	1
6	Rear sheet	1	17	Pinch roller	2
7	Transfer gear	1	18	Document sensor lever spring	1
8	Bearing	1	19	Document sensor lever	1
9	Transfer roller	1	20	Insulation sheet	1
10	Idler gear (28Z)	1	21	Document guide upper	1
11	Idler gear (20Z)	1			

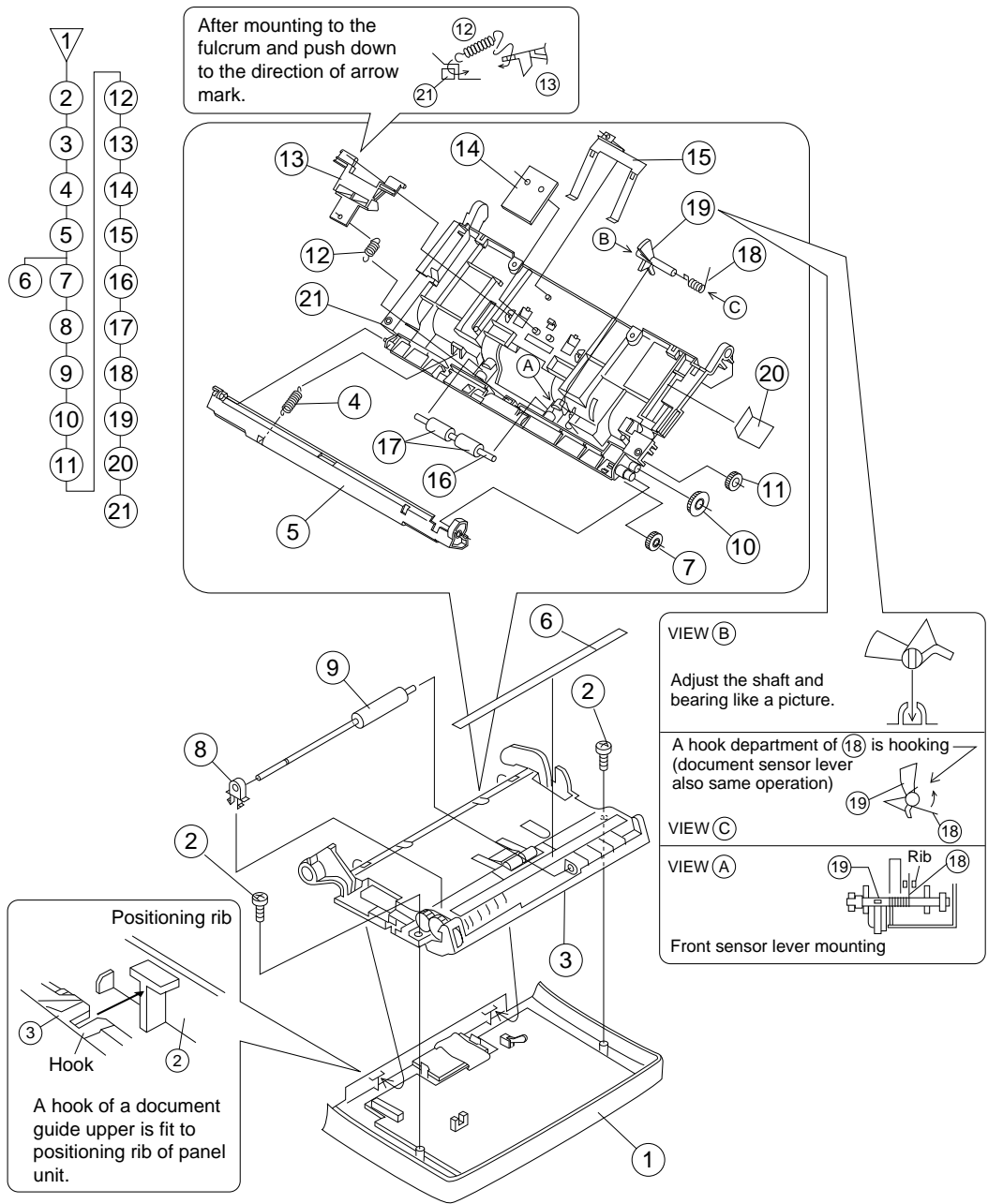


Fig. 6

7	Operation panel
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- Remove the bottom plate ass'y from the mechanism unit according to procedure 1-a.
- Remove the top cover and paper out guide unit from the mechanism unit according to procedure 2-b.
- Remove the operation panel unit document guide lower from the mechanism unit according to procedure 5-c.
- Remove the operation panel from the operation panel unit according to the flowchart.

Parts list (Fig. 7)

No.	Part name	Q'ty	No.	Part name	Q'ty
1	Operation panel unit	1	7	Stop key	1
2	Screw (2×6)	6	8	Function key	1
3	Operation panel PWB unit	1	9	Mode key	1
			10	Direct key	1
4	Key sheet	1	11	12 key	1
5	12 key rubber sheet	3	12	Operation panel	1
6	Start key	1			

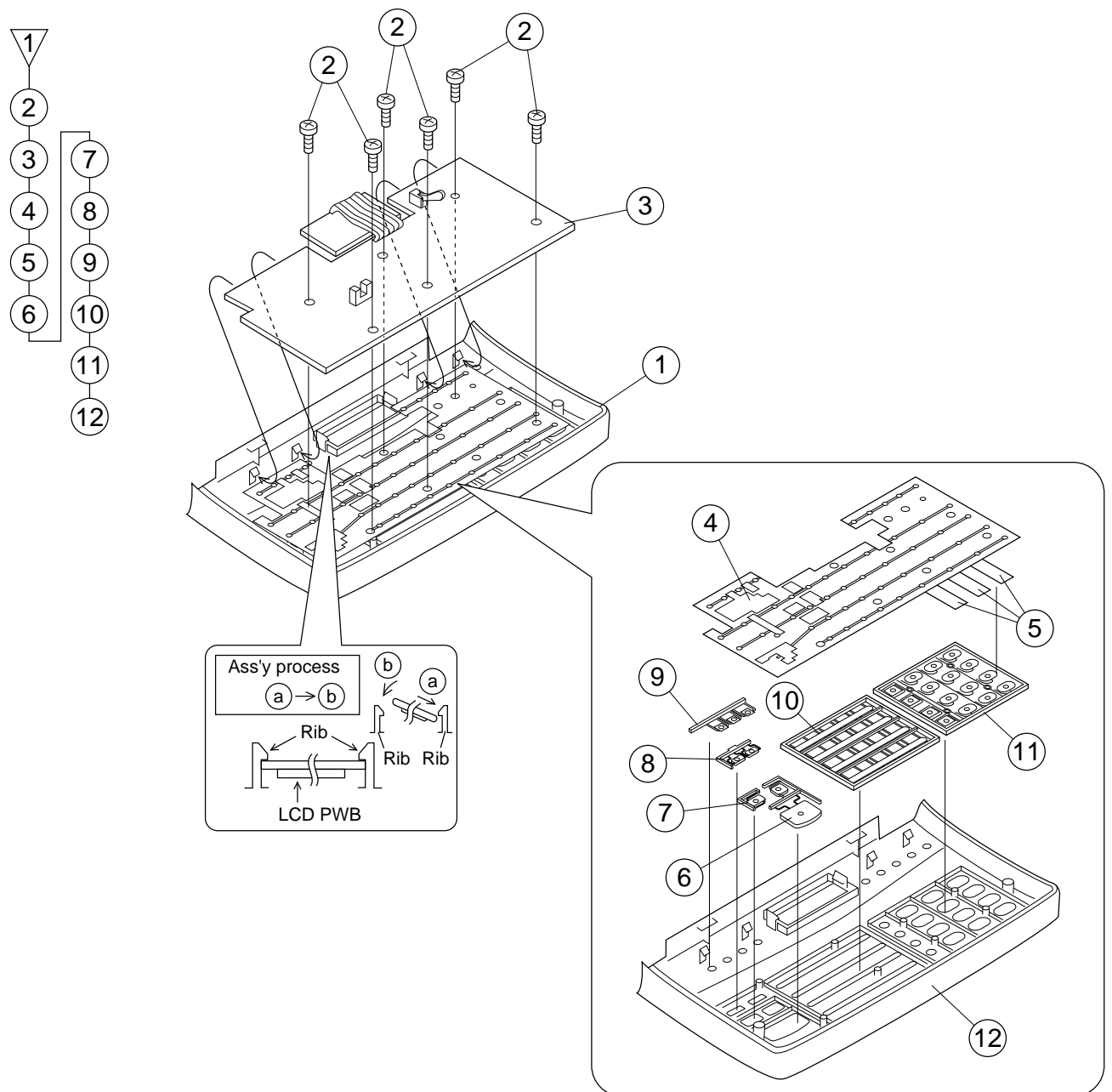


Fig. 7

8

Handset cover, optical unit,
drive unit and joint PWB unit

- a. Remove the bottom plate ass'y from the mechanism unit according to procedure 1-a.
- b. Remove the top cover and paper out guide unit from the mechanism unit according to procedure 2-b.
- c. Remove the operation panel unit and document guide lower from the mechanism unit according to procedure 5-c.
- d. Remove the handset cover, optical unit, drive unit and joint PWB unit from the mechanism unit according to the flowchart.

Parts list (Fig. 8)

No.	Part name	Q'ty	No.	Part name	Q'ty
1	Mechanism unit	1	9	Dustproof sheet, right	1
2	Screw (3×8)	2	10	PO sheet	1
3	Connector	1	11	Connector	3
4	Cover switch	1	12	Screw (3×8)	1
5	Handset cover	1	13	Drive unit	1
6	Connector	2	14	Screw (3×8)	1
7	Optical unit	1	15	Screw	1
8	Dustproof sheet, left	1	16	Joint PWB unit	1

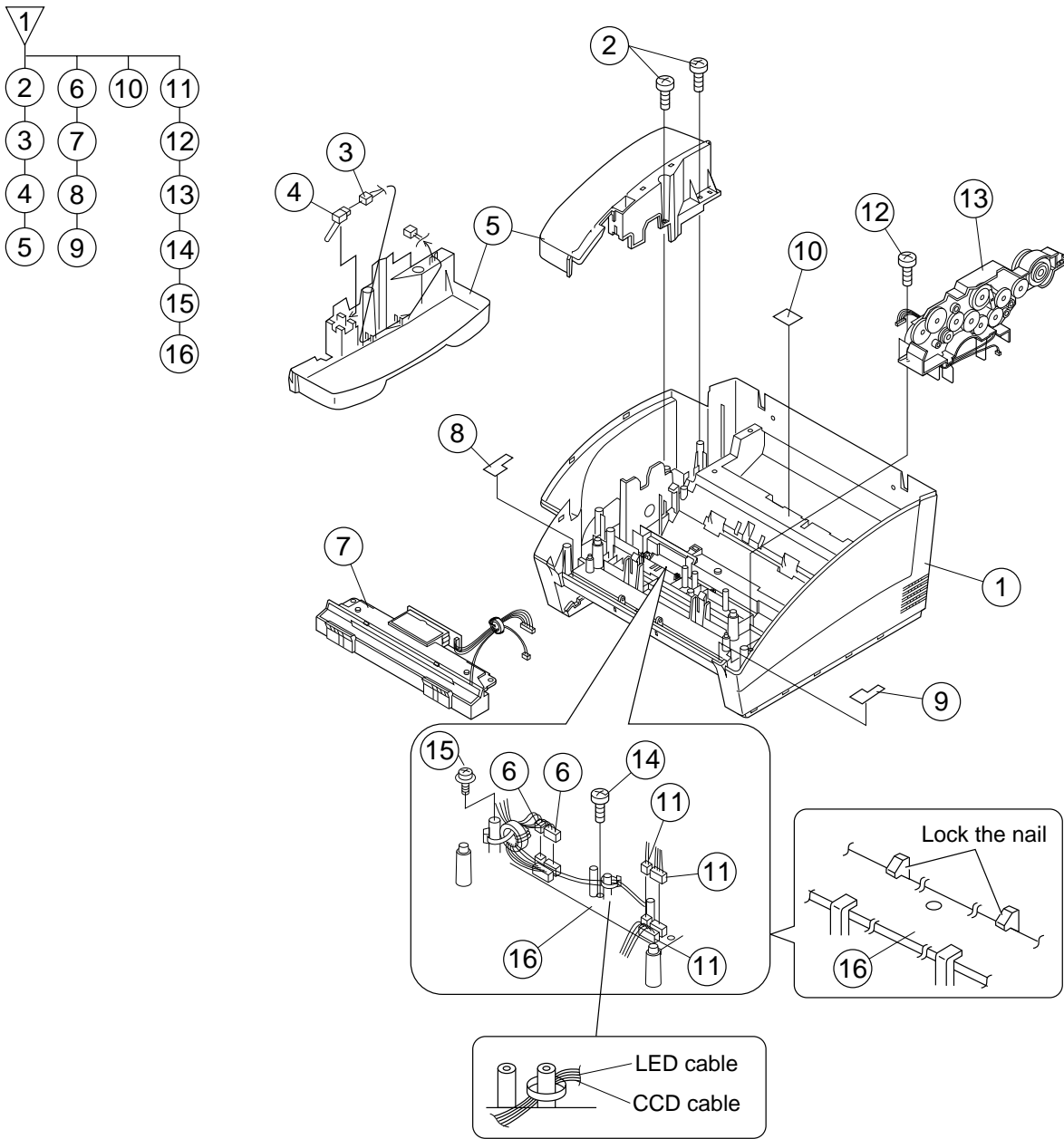


Fig. 8

9 Optical frame

- Remove the bottom plate ass'y from the mechanism unit according to procedure 1-a.
- Remove the top cover and paper out guide unit from the mechanism unit according to procedure 2-b.
- Remove the operation panel unit and document guide lower from the mechanism unit according to procedure 5-c.
- Remove the optical unit from the mechanism unit according to procedure 8-d.
- Remove the optical frame from the optical unit according to the flowchart.

Parts list (Fig. 9)

No.	Part name	Q'ty	No.	Part name	Q'ty
1	Optical unit	1	10	LED dustproof sheet	2
2	Screw (Red)	1	11	Shield sheet	2
3	CCD PWB unit	1	12	Dustproof sheet, left	1
4	CCD spacer	1	13	Dustproof sheet, right	1
5	Shading sheet	1	14	Mirror 3	1
6	Lens holding spring	1	15	Mirror sheet	2
7	Lens	1	16	Mirror 1	1
8	Reader glass	1	17	Mirror 2	1
9	LED	1	18	Optical frame	1

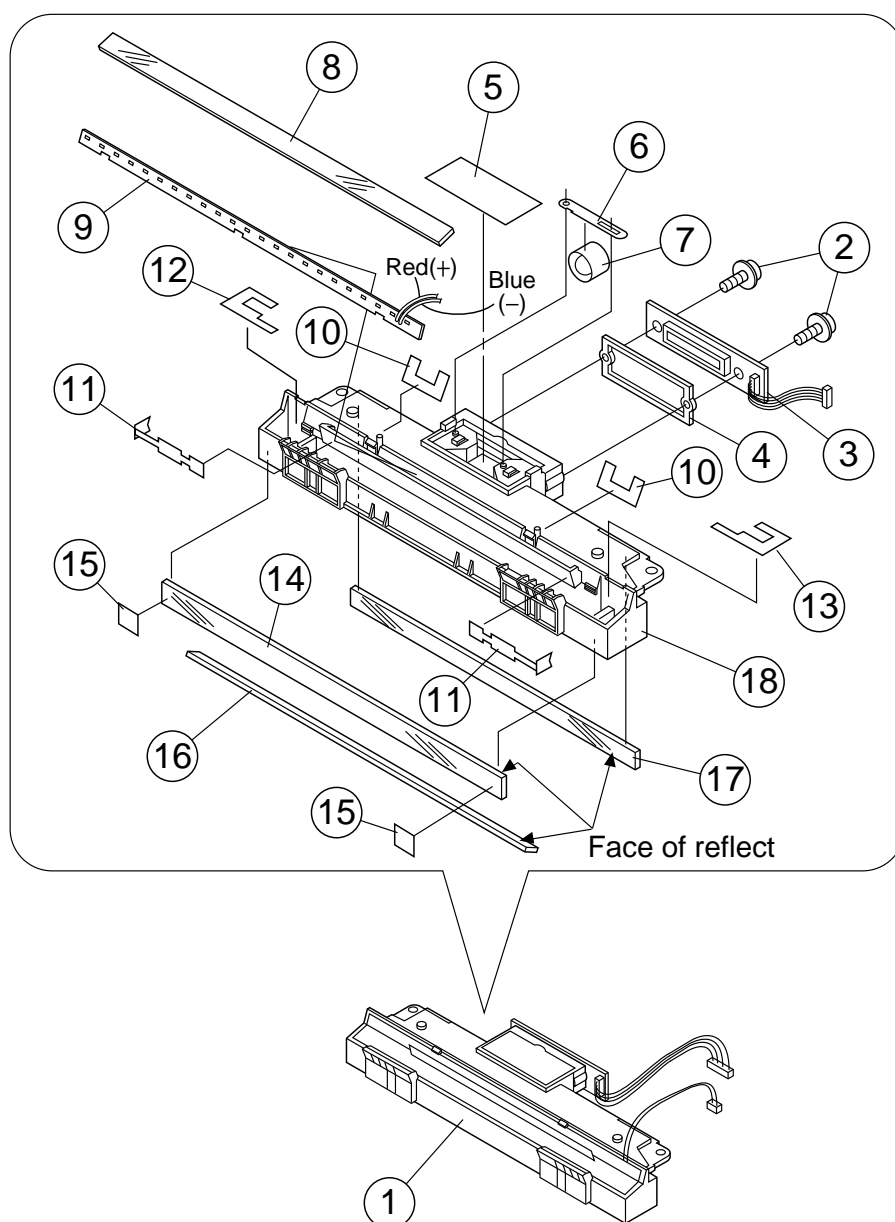
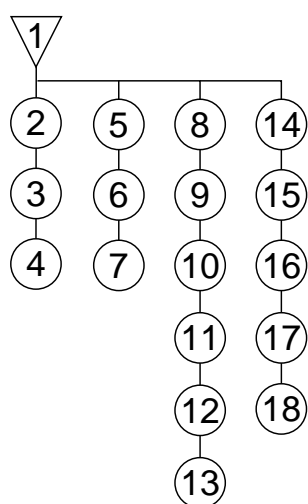


Fig. 9

10 Drive plate

- a. Remove the bottom plate ass'y from the mechanism unit according to procedure 1-a.
- b. Remove the top cover and paper out guide unit from the mechanism unit according to procedure 2-b.
- c. Remove the operation panel unit and document guide lower from the mechanism unit according to procedure 5-c.
- d. Remove the drive unit from the mechanism unit according to procedure 8-d.
- e. Remove the drive plate from the drive unit according to the flowchart.

Parts list (Fig. 10)

No.	Part name	Q'ty	No.	Part name	Q'ty
1	Drive unit	1	11	Reduction gear B	1
2	Screw (3×8)	2	12	Planet lever 4 ass'y	1
3	Motor	1	13	Planet lever 3 ass'y	1
4	Motor heat sink	1	14	Planet lever 2 ass'y	1
5	Tape-up gear	1	15	Planet lever 1 ass'y	1
6	Slip gear ass'y	1	16	Cam A	1
7	Reduction gear A	1	17	Cam hold spring	1
8	Reduction gear F	1	18	Cam switch ass'y	1
9	Reduction gear C	1	19	Drive plate	1
10	Idler gear A	5			

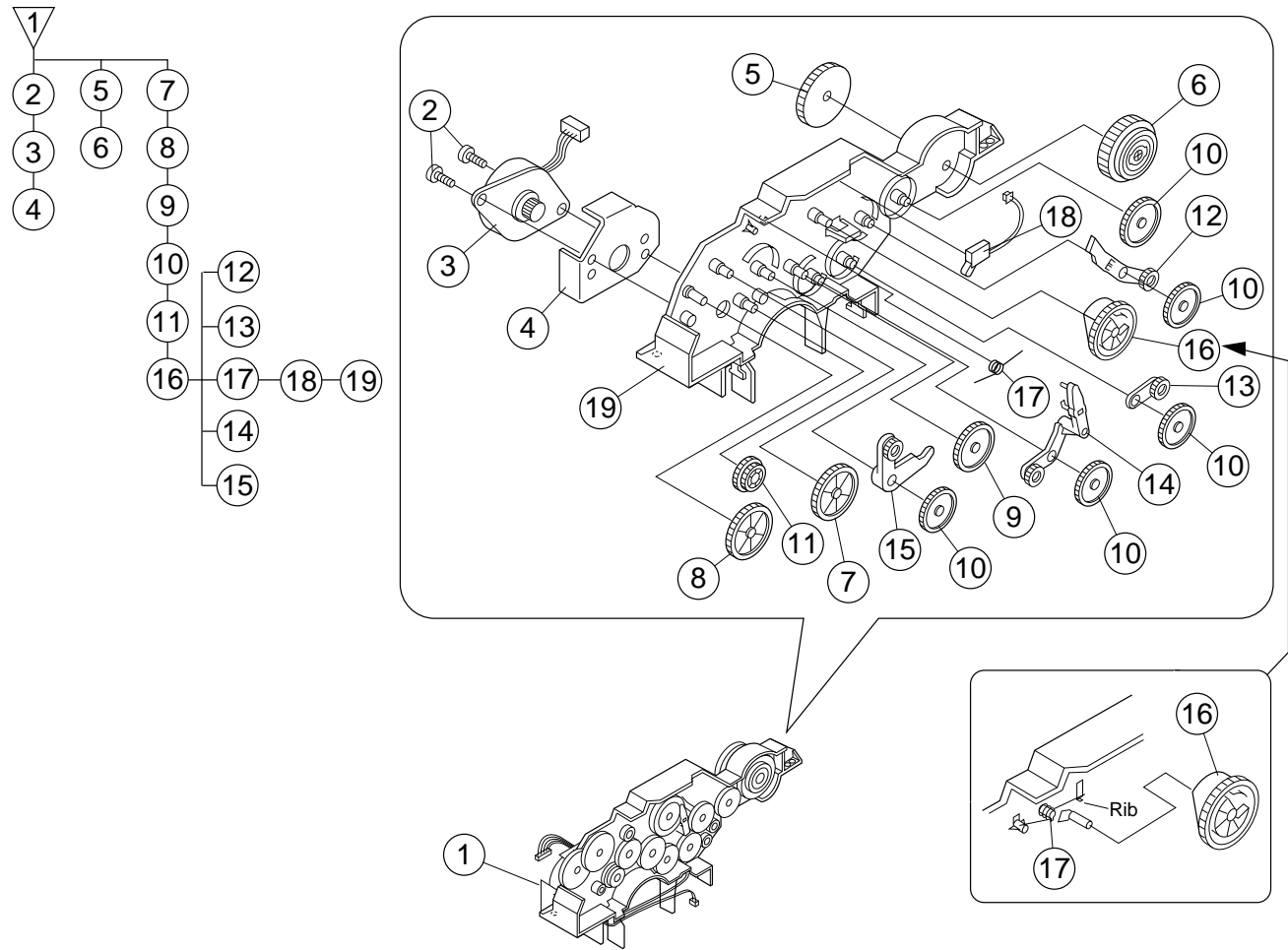


Fig. 10

11 Transfer roller etc. and speaker

- Remove the bottom plate ass'y from the mechanism unit according to procedure 1-a.
- Remove the top cover and paper out guide unit from the mechanism unit according to procedure 2-b.
- Remove the operation panel unit and document guide lower from the mechanism unit according to procedure 5-c.
- Remove the handset cover, optical unit, drive unit and joint PWB unit from the mechanism unit according to procedure 8-d.
- Remove the transfer roller etc. and speaker from the mechanism unit according to the flowchart.

Parts list (Fig. 11)

No.	Part name	Q'ty	No.	Part name	Q'ty
1	Mechanism unit	1	11	Back tension stopper	1
2	PO belt	1	12	Back tension gear	1
3	PF gear	1	13	Back tension felt	1
4	PF roller	1	14	Slip spring	1
5	PO roller	1	15	Hold down plate B	1
6	Platen bearing	2	16	Pinch pressing spring	2
7	Platen roller	1	17	Pinch roller	2
8	Platen gear	1	18	Pinch roller shaft	1
9	PE sensor lever	1	19	Roller	1
10	PU roller ass'y	1			

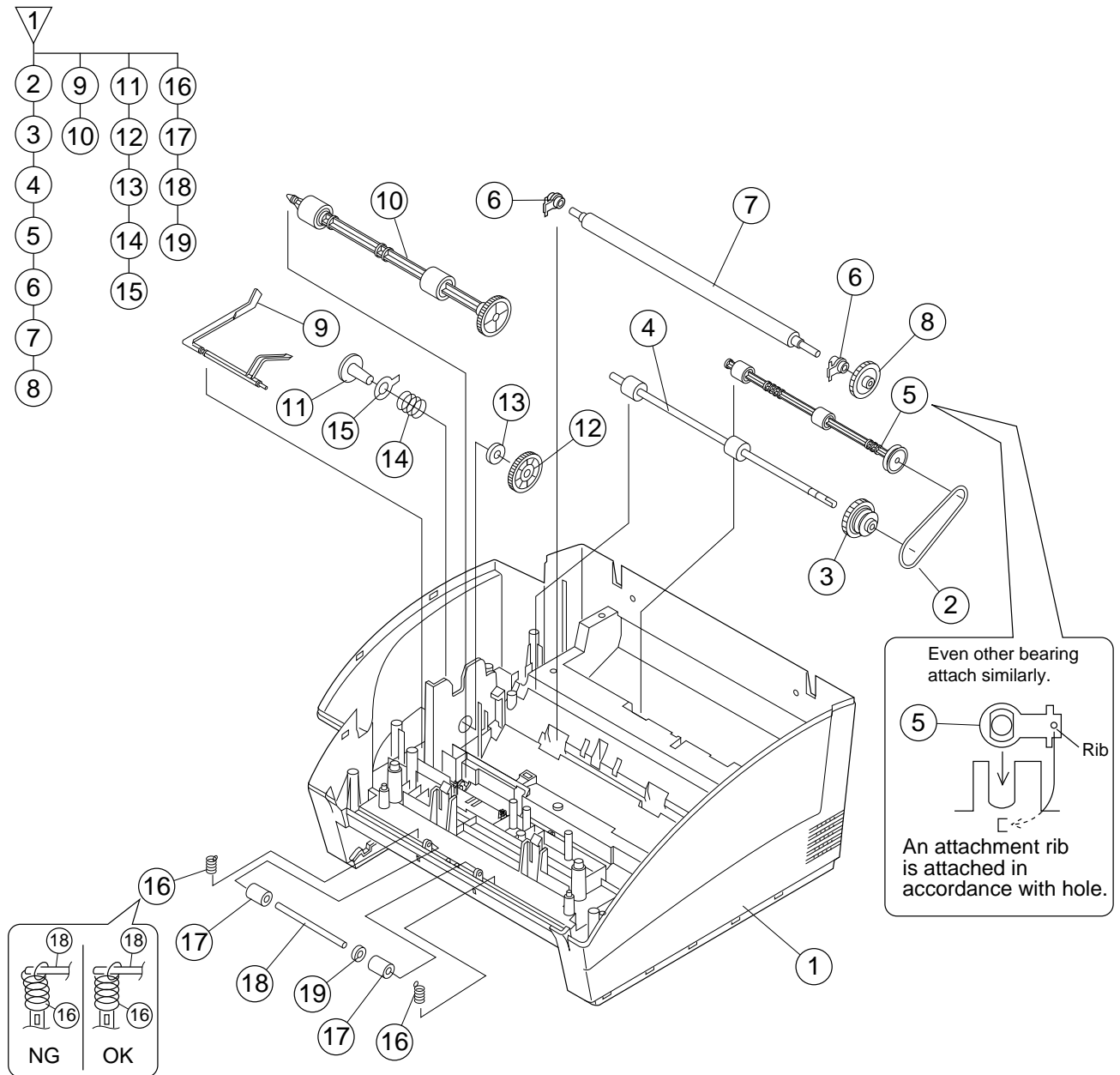


Fig. 11

12 PWB section

- a. Remove the bottom plate ass'y from the mechanism unit according to procedure 1-a.
- b. Remove the PWB's and AC cord from the bottom plate according to the flowchart.

Parts list (Fig. 12)

No.	Part name	Q'ty
1	Bottom plate	1
2	Screw (3×8)	1
3	Screw (3×6)	1
4	Screw (3×5)	5
5	TEL/LIU PWB unit	1
6	Control PWB unit	1
7	Screw (4×6)	1
8	AC cord	1
9	Power supply PWB unit	1
10	PWB spacer	1

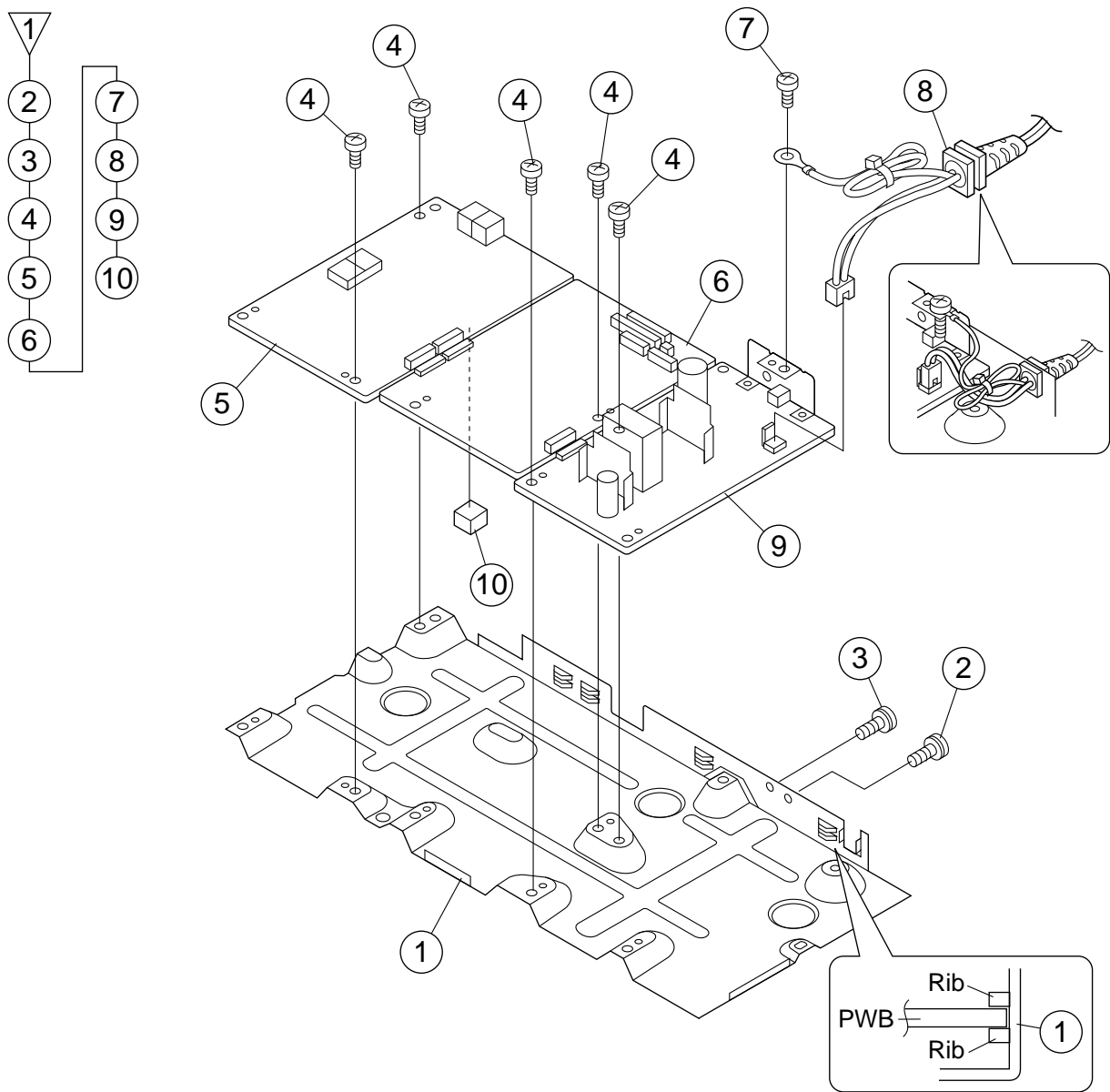


Fig. 12

13 Wire treatment

- Perform wire treatment carefully and deliberately.
- For wire treatment procedures which are not described in this section, refer to the section for that portion of the unit.

Parts list (Fig. 13)

No.	Part name	Q'ty
1	UL tape	1
2	Band	11
3	Core	5
4	Core	2
5	Screw (3×6)	1
6	Screw	1

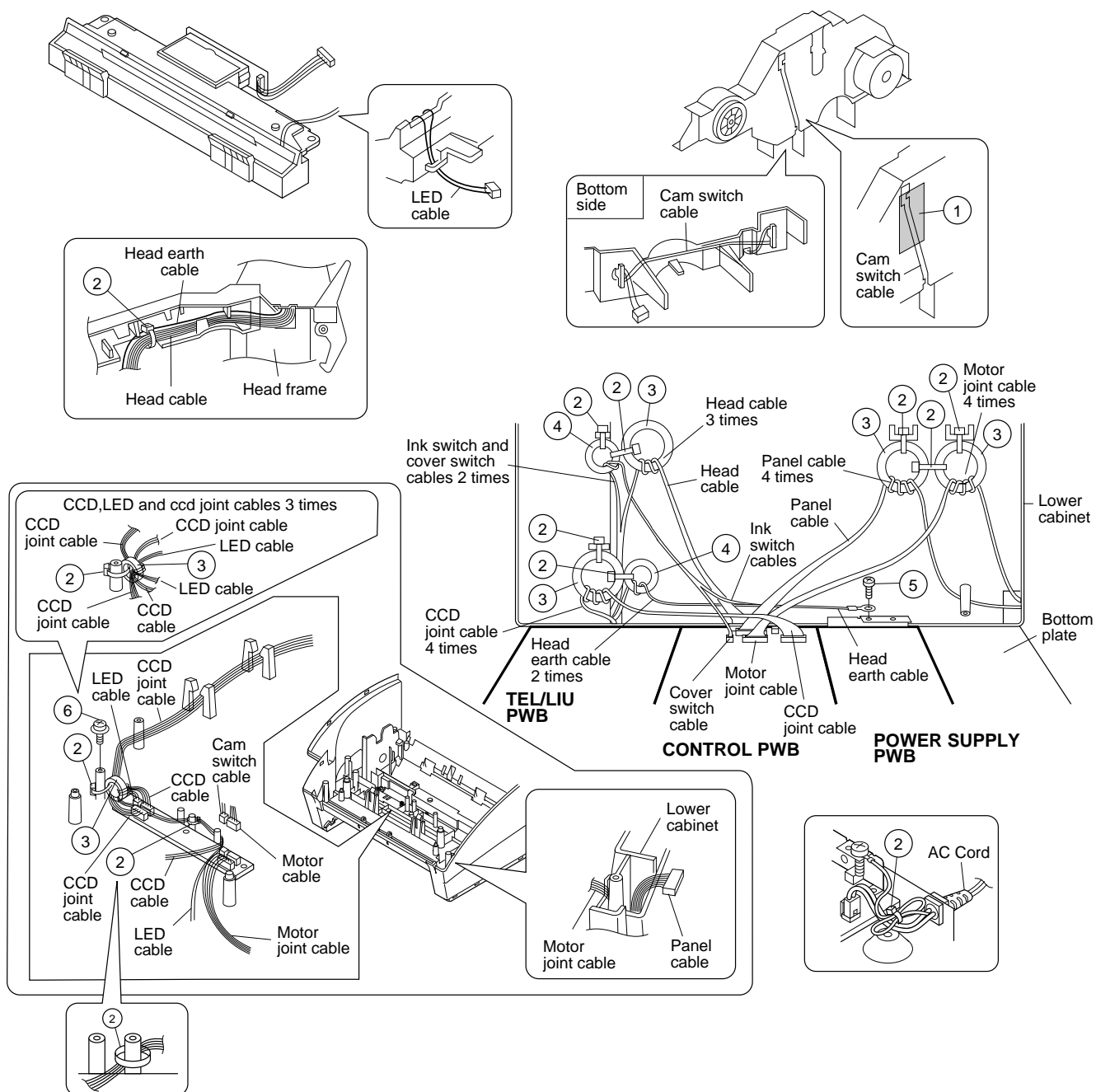
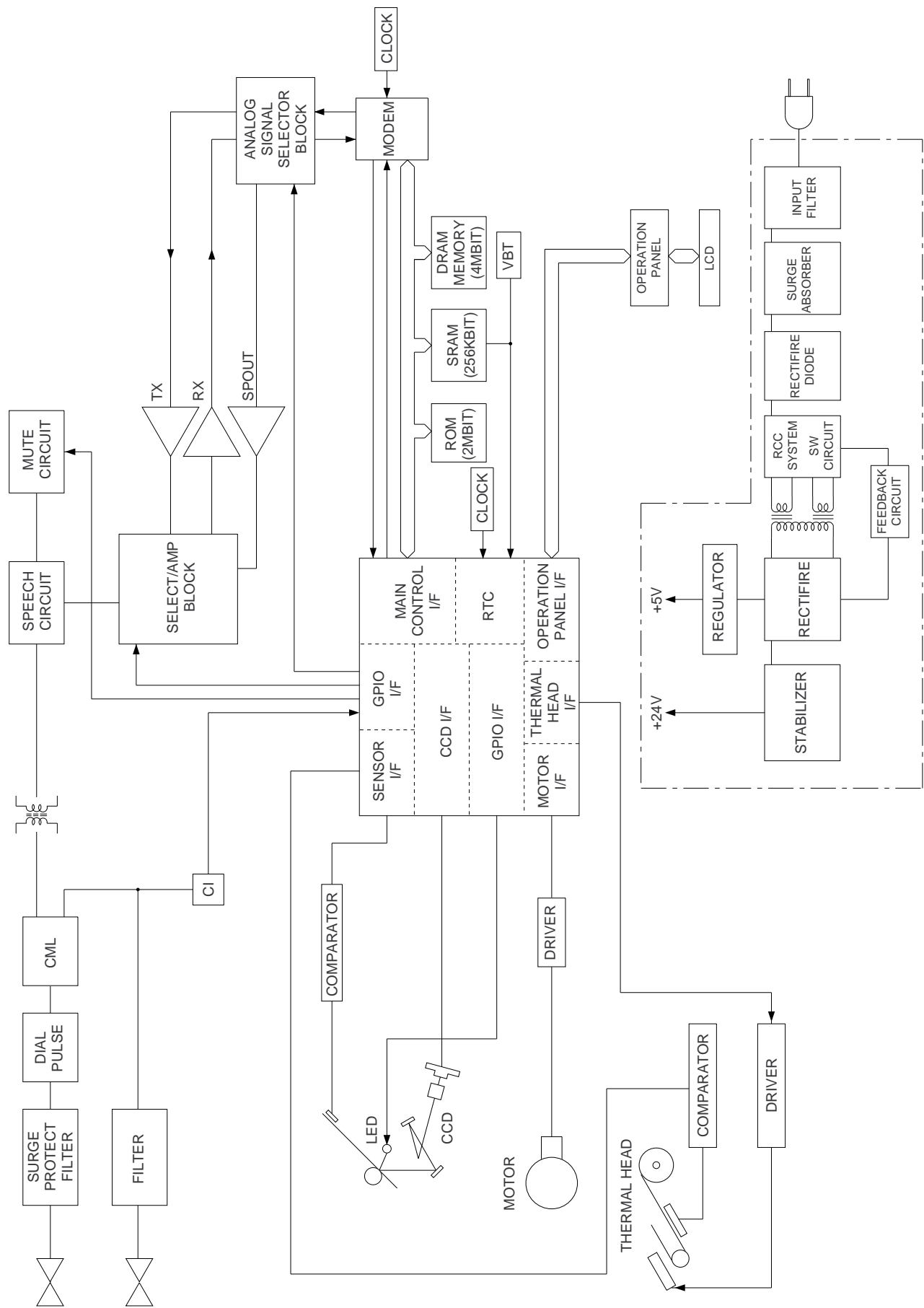


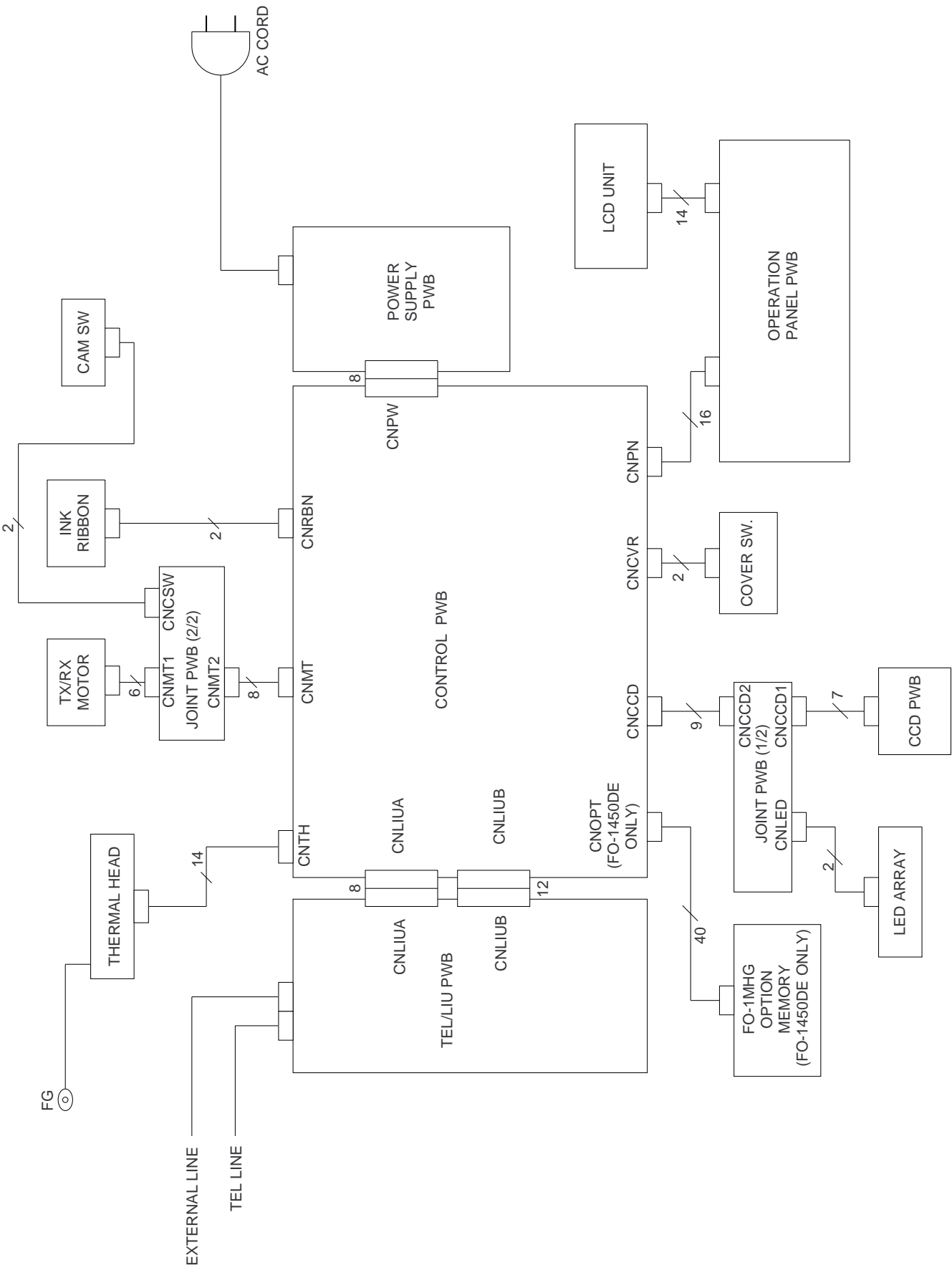
Fig. 13

CHAPTER 4. DIAGRAMS

[1] Block diagram



[2] Wiring diagram





CHAPTER 5. CIRCUIT DESCRIPTION

[1] Circuit description

1. General description

The compact design of the control PWB is obtained by using ROCKWELL fax engine in the main control section and high density printing of surface mounting parts. Each PWB is independent according to its function as shown in Fig. 1.

2. PWB configuration

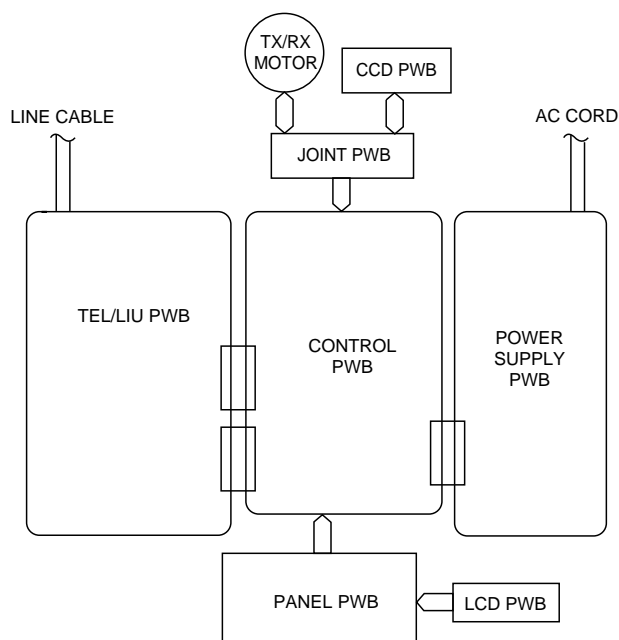


Fig. 1

1) Control PWB

The control PWB controls peripheral PWBs, mechanical parts, transmission, and performs overall control of the unit.

This machine employs a 1-chip modem (R96DFXL) which is installed on the control PWB.

2) TEL/LIU PWB

This PWB controls connection of the telephone line to the unit.

3) Power supply PWB

This PWB provides voltages of +5V and +24V to the another PWB.

4) Panel PWB

The panel PWB allows input of the operation keys.

5) CCD PWB

This PWB controls the pickup optical device.

6) LCD PWB

This PWB controls the LCD display.

7) Joint PWB

This PWB joins cables.

3. Operational description

Operational descriptions are given below:

- Transmission operation

When a document is loaded in standby mode, the state of the document sensor is sensed via the 1 chip fax engine (SFE-LC). If the sensor signal was on, the motor is started to bring the document into the standby position. With depression of the START key in the off-hook state, transmission takes place.

Then, the procedure is sent out from the modem and the motor is rotated to move the document down to the scan line. In the scan processor, the signal scanned by the CCD is sent to the internal image processor and the AD converter to convert the analog signal into binary data. This binary data is transferred from the scan processor to the image buffer within the RAM and encoded and stored in the transmit buffer of the RAM. The data is then converted from parallel to serial form by the modem where the serial data is modulated and sent onto the line.

- Receive operation

There are two ways of starting reception, manual and automatic. Depression of the START key in the off-hook mode in the case of manual receive mode, or CI signal detection by the LIU in the automatic receive mode.

First, the XFC-MVP controls the procedure signals from the modem to be ready to receive data. When the program goes into phase C, the serial data from the modem is converted to parallel form in the modem interface of the 1 chip fax engine (XFC-MVP) which is stored in the receive buffer of the RAM. The data in the receive buffer is decoded software-wise to reproduce it as binary image data in the image buffer. The data is DMA transferred to the recording processor within the main control gate array which is then converted from parallel to serial form to be sent to the thermal head. The data is printed line by line by the XFC-MVP which is assigned to control the motor rotation and strobe signal.

- Copy operation

To make a copy on this facsimile, the COPY key is pressed when the machine is in stand-by with a document on the document table and the telephone set is in the on-hook state.

First, depression of the COPY key advances the document to the scan line. Similar to the transmitting operation, the image signal from the CCD is converted to a binary signal in the DMA mode via the 1 chip fax engine (XFC-MVP) which is then sent to the image buffer of the RAM. Next, the data is transferred to the recording processor in the DMA mode to send the image data to the thermal head which is printed line by line. The copying takes place as the operation is repeated.

[2] Circuit description of control PWB

1. General description

Fig. 2 shows the functional blocks of the control PWB, which is composed of 5 blocks.

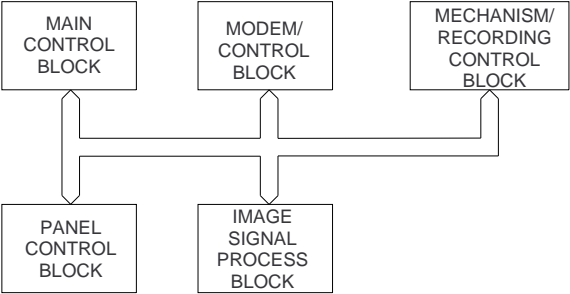


Fig. 2 Control PWB functional block diagram

2. Description of each block

(1) Main control block

The main control block is composed of ROCKWELL 1 chip fax engine (XFC-MVP), ROM (256KByte), RAM (32KByte), DRAM (512KByte). Devices are connected to the bus to control the whole unit.

1) XFC-MVP (IC3) : pin-144 QFP (XFC-MVP)

The FAXENGINE Integrated Facsimile Controllers.

XFC-MVP, contains an internal 8 bit microprocessor with an external 16 Mbyte address space and dedicated circuitry optimized for facsimile image processing and facsimile machine control and monitoring.

2) 27C020 (IC2): pin-32 DIP (ROM)

EPROM of 2Mbit equipped with software for the main CPU.

3) M5M5255CFP (IC12): pin-28 SOP (RAM)

Line memory for the main CPU system RAM area and coding/decoding process. Used as the transmission buffer.

Memory of recorded data such as daily report and auto dials. When the power is turned off, this memory is backed up by the lithium battery.

4) HM514800AJ8 (IC15): pin-28 SOJ (RAM)

Image memory for recording process.

- Memory for recording pixel data at without paper.

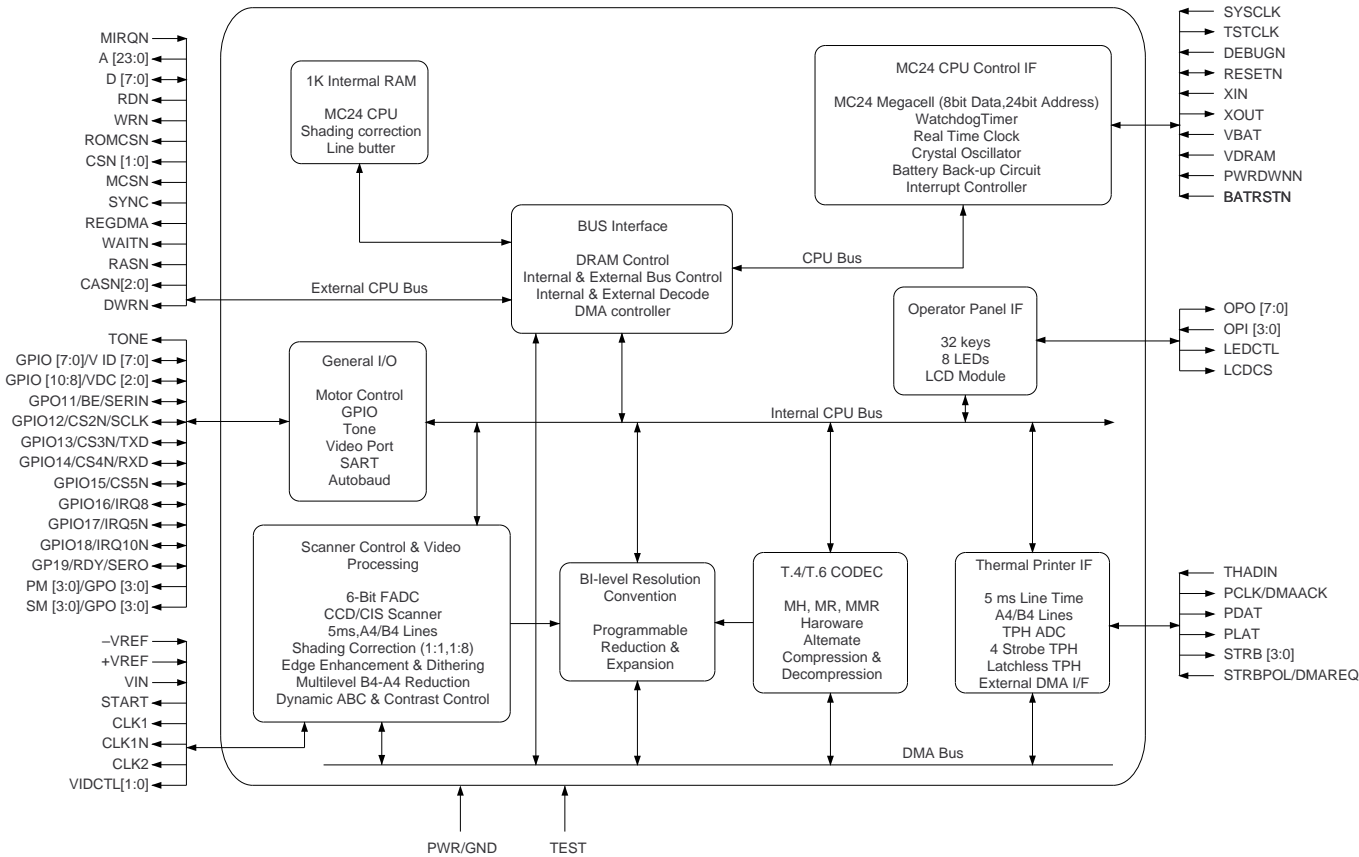


Fig. 3

XFC-MVP (IC3) Terminal descriptions

Pin Name	Pin No.	I/O	Input Type	Output Type	Pin Description (Active low signals have an "n" pin name ending.)
CPU Control Interface					
MIRQn	135	I	HU	–	Modem interrupt, active low. (Hysteresis In, Internal Pullup.)
SYSCLK	133	I	H	–	System clock. (Hysteresis In.)
TSTCLK	130	O	–	3XC	Test clock.
Bus Control Interface					
A[23:0]	[1:6][8:13] [15:20][22:27]	O	T	3XT	Address bus (24-bit).
D[7:0]	[136:139] [141:144]	I/O	T	3XT	Data bus (8-bit).
RDn	128	O	–	3XTT	Read strobe.
WRn	127	O	–	3XTT	Write strobe.
ROMCSn	120	O	–	2XT	ROM chip select.
CS1n	122	O	–	2XT	I/O chip select.
CS0n	57	O	–	2XTT	SRAM chip select. (Battery powered.)
MCSn	121	O	–	2XC	Modem chip select.
SYNC	126	O	–	2XC	Indicates CPU op code fetch cycle (active high).
REGDMA	124	O	–	3XC	Indicates REGSEL cycle and DMA cycle.
WAITn	125	O	–	3XC	Indicates current TSTCLK cycle is a wait state or a halt state.
RASn	113	O	–	3XTT	DRAM row address select.
CAS[2:0]n	[110:112]	O	–	2XTT	DRAM column address select.
DWRn	109	O	–	3XTT	DRAM write.
Prime Power Reset Logic and Test					
DEBUGn	129	I	HU	–	External non-maskable input (NMI).
RESETn	131	I/O	HU	2XO	XFC Reset.
TEST	58	I	C	–	Sets Test mode (battery powered).
Battery Power Control and Reset Logic					
XIN	59	I	OSC	–	Crystal oscillator input pin.
XOUT	60	O	–	OSC	Crystal oscillator output pin.
PWRDWNn	62	I	H	–	Indicates loss of prime power (results in NMI).
BATRSTn	61	I	H	–	Battery power reset input.
Scanner Interface					
START	101	O	–	2XS	Scanner shift gate control.
CLK1	100	O	–	2XS	Scanner clock.
CLK1n	99	O	–	2XS	Scanner clock-inverted.
CLK2	98	O	–	2XS	Scanner reset gate control (or clock for CIS scanner).
VIDCTL[1:0]	[97:96]	O	–	2XC	Control for video preprocessing circuits.
Printer Interface					
PCLK/ DMAACK	29	O	–	3XC	Thermal Print Head (TPH) clock, or external DMAACK.
PDAT	30	O	–	2XP	Serial printing data (to TPH).
PLAT	31	O	–	3XP	TPH data latch.
STRB[3:0]	[33:36]	O	–	1XP	Strobe signals for the TPH.
STRBPOL/ DMARQ	37	I	C	–	Sets strobe polarity, active high/low or external DMAREQ.

XFC-MVP (IC3) Terminal descriptions

Pin Name	Pin No.	I/O	Input Type	Output Type	Pin Description
Operator Panel Interface					
OPO[7:0]	[38:40][42:44] [46:47]	O	–	2XL	Keyboard/LED strobe [7:0].
OPI[3:0]	[49:52]	I	HU	–	Keyboard return [3:0]. (Pullup. Hysteresis In.)
LEDCTL	55	O	–	4XC	Indicates outputs OPO [7:0] are for LEDs.
LDCDS	54	O	–	1XC	LCD chip select.
General Purpose I/O					
GPIO[7:0]/VID[7:0]	[86:87][89:94]	I/O	H	2XC	Programmable: GPIO (8 lines) or video data bus.
GPIO[10:8]/VDC[2:0]	[83:85]	I/O	H	2XC	Programmable: GPIO (3 lines) or video data control signals.
GPIO11/BE/SERINP	82	I/O	H	1XC	Programmable: GPIO line, Bus Enable, serial data input (Autobaud).
GPIO12/CS2n/SCLK	80	I/O	H	2XC	Programmable: GPIO line, I/O chip select or SCLK (SART).
GPIO13/CS3n/TXD	79	I/O	H	2XC	Programmable: GPIO line, I/O chip select or TXD (SART).
GPIO14/CS4n/RXD	78	I/O	H	2XC	Programmable: GPIO line, I/O chip select or RXD (SART).
GPIO15/CS5n	77	I/O	H	2XC	Programmable: GPIO line or I/O chip select.
GPIO16/IRQ8	76	I/O	H	1XC	Programmable: GPIO line or active high interrupt.
GPIO17/IRQ5n	75	I/O	H	1XC	Programmable: GPIO line or active low interrupt.
GPIO18/IRQ10n	74	I/O	H	1XC	Programmable: GPIO line or active low interrupt.
GPIO[19]/RDY/SEROUT	73	I/O	H	1XC	Programmable: GPIO line, Ready or Serial out (Autobaud).
Miscellaneous					
SM[3:0]/GPO[7:4]	[103:106]	O	–	1XC	Programmable: scan motor control pins or GPO pins.
PM[3:0]/GPO[3:0]	[115:118]	O	–	1XC	Programmable: print motor control pins or GPO pins.
TONE	119	O	–	1XC	Tone output signal.
Power, Reference Voltages, Ground					
–Vref	66	I	–VR	–	Negative Reference Voltage for Video A/D.
+Vref	68	I	+VR	–	Positive Reference Voltage for Video A/D.
ADGA	69		VADG		A/D Analog Ground.
ADVA	70		VADV		A/D Analog Power.
ADGD	72		VADG		A/D Digital Ground.
ADVD	71		VADV		A/D Digital Power.
VIN	67	I	VA	–	Analog Video A/D input.
THADI	65	I	TA	–	Analog Thermal A/D input.
VSS (12)	134, 132, 108, 95, 88, 64, 56, 53, 45, 28, 21,7				Digital Ground.
VDD (8)	140, 123, 102, 81, 48, 41, 32, 14				Digital Power.
VDRAM	114				Battery power for DRAM refresh.
VBAT	63				Battery Power, for RTC and SRAM.
No Connection					
NC	107				No connection.

(2) Panel control block

The following controls are performed by the XFC-MVP.

- Operation panel key scanning
- Operation panel LCD display

(3) Mechanism/recording control block

The following controls are performed by XFC-MVP.

- Motor control
- Thermal head control
- Cutter motor control
- Sensor detection

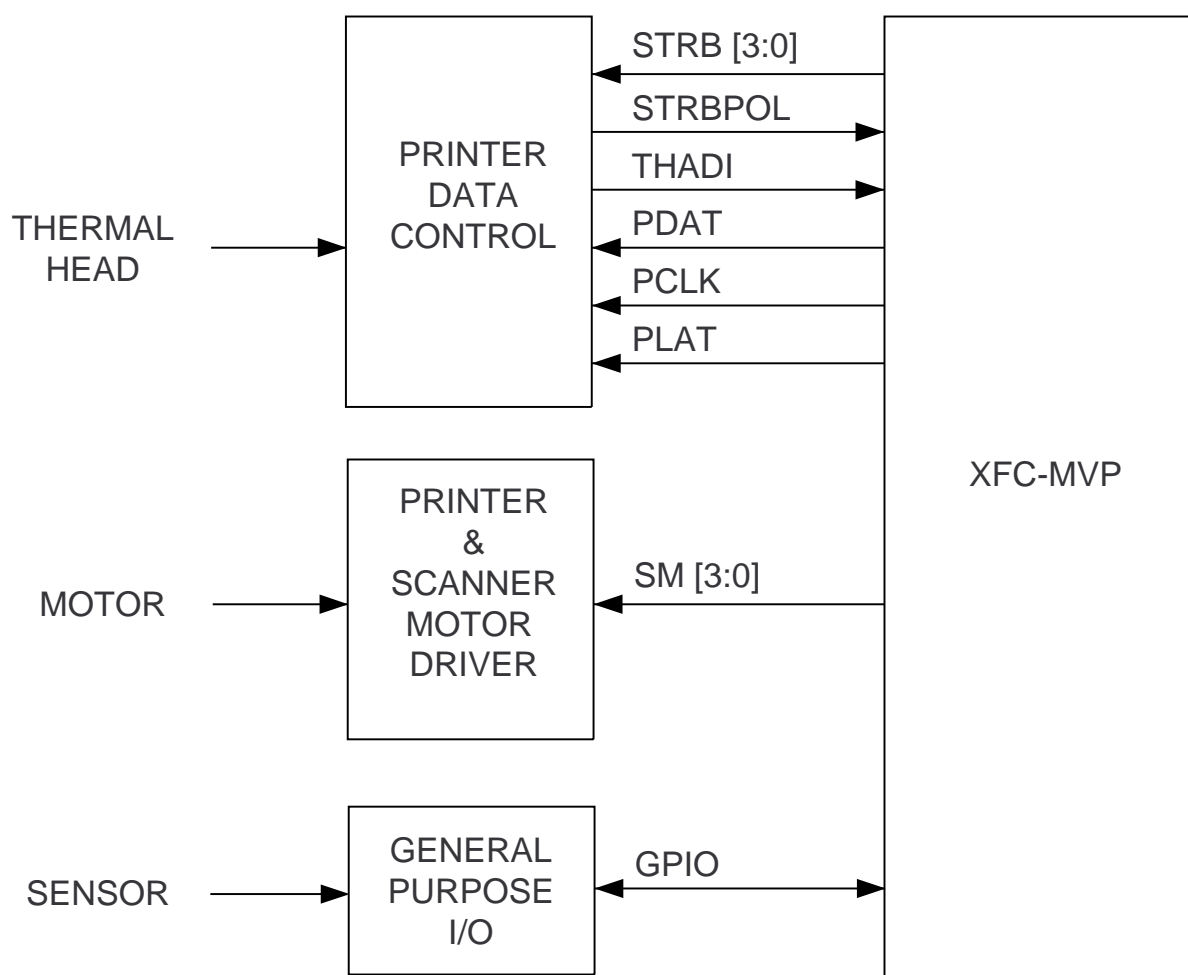


Fig. 4

(4) Modem (R96DFXL) block

INTRODUCTION

The Rockwell R96DFXL MONOFAX modem is a synchronous 9600 bits per second (bps) half-duplex modem with error detection and DTMF reception. It has low power consumption and requires only a single +5V DC power supply. The modem is housed in a single VLSI device package.

The modem can operate over the public switched telephone network (PSTN) through line terminations provided by a data access arrangement (DAA).

The R96DFXL is designed for use in Group 3 facsimile machines. The modem satisfies the requirements specified in CCITT recommendations V.29, V.27 ter, V.21 Channel 2 and T.4, and meets the binary signaling requirements of T.30.

The modem can operate at 9600, 7200, 4800, 2400, or 300 bps, and also includes the V.27 ter short training sequence option.

The modem can also perform HDLC framing according to T.30 at 9600, 7200, 4800, 2400, or 300 bps.

The modem features a programmable DTMF receiver and three programmable tone detectors which operate concurrently with the V.21 channel 2 receiver.

The voice mode allows the host computer to efficiently transmit and receive audio signals and messages.

The modem is available in either a 100-pin plastic quad flat pack (PQFP) or a 64-pin quad in-line package (QUIP).

General purpose input/output (GPIO) pins are available for host assignment in the 100-pin PQFP.

The modem's small size, single voltage supply, and low power consumption allow the design of compact system enclosures for use in both office and home environments.

MONOFAX is a registered trademark of Rockwell International.

FEATURES

- Group 3 facsimile transmission/reception
 - ITU-TS V.29, V.27 ter, T.30, V.21 Channel 2, T.4
 - HDLC Framing at all speeds
- V.27 ter short train
- Concurrent DTMF, FSK, and tone reception
- Voice mode transmission/reception
- Half-duplex (2-wire)
- Programmable maximum transmit level:
 - 0 dBm to -15 dBm
- Programmable transmit analog attenuation:
 - 0 dB to 14 dB in 2 dB steps
- Receive dynamic range: 0 dBm to -43 dBm
- Programmable dual tone generation
- Programmable tone detection
- Programmable turn-on and turn-off thresholds
- Programmable interface memory interrupt
- Diagnostic capability
 - Allows telephone line quality monitoring
- Equalization
 - Automatic adaptive equalizer
 - Fixed digital compromise equalizer
- DTE interface: two alternate ports
 - Selectable microprocessor bus (6500 or 8085)
 - CCITT V.24 (EIA-232-D compatible) interface
- TTL and CMOS compatible
- Low power consumption: 275 mW (typical)
- Single Package
 - 100-pin PQFP
 - 64-pin QUIP
- Single +5VDC power supply
- Software compatible with R96MFX, R96EFX, R96SHF, and R96VFX modems

R96DFXL (IC4) Hardware Interface Signals

Pin Signals – 100-Pin PQFP

Pin No.	Signal Name	I/O Type
1	GP03	IA/OB
2	GP04	IA/OB
3	GP05	IA/OB
4	GP06	IA/OB
5	GP07	IA/OB
6	0VD2	GND
7	0VD2	GND
8	D7	IA/OB
9	D6	IA/OB
10	D5	IA/OB
11	D4	IA/OB
12	D3	IA/OB
13	D2	IA/OB
14	D1	IA/OB
15	D0	IA/OB
16	0VD2	GND
17	0VA	GND
18	RAMPIN	R
19	NC	
20	NC	
21	0VA	GND
22	+5VD2	PWR
23	0VD1	GND
24	SWGAINI	R
25	ECLKIN1	R
26	SYNCIN1	R
27	NC	
28	NC	
29	NC	
30	0VA	GND
31	NC	
32	NC	
33	NC	
34	DAIN	R
35	ADOUT	R
36	BYPASS	IC
37	RCVI	R
38	TXLOSS3	IC
39	TXLOSS2	IC
40	TXLOSS1	IC
41	NC	
42	NC	
43	0VA	GND
44	TXOUT	AA
45	RXIN	AB
46	+5VA	PWR
47	0VA	GND
48	AGD	R
49	AOUT	R
50	0VD1	GND
51	NC	
52	IRQ	OC
53	WRITE-R/W	IA
54	CS	IA
55	READ-φ2	IA
56	RS4	IA
57	RS3	IA
58	RS2	IA
59	RS1	IA

Pin No.	Signal Name	I/O Type
60	RS0	IA
61	GP13	IA/OB
62	NC	
63	GP11	IA/OB
64	RTS	IA
65	EN85	R
66	0VD2	GND
67	PORI	ID
68	XTLI	R
69	XTLO	R
70	XCLK	OD
71	YCLK	OD
72	+5VD1	PWR
73	DCLK1	R
74	SYNCIN2	R
75	GP16	IA/OB
76	GP17	IA/OB
77	0VD2	GND
78	CTS	OA
79	TXD	IA
80	0VD2	GND
81	0VD2	GND
82	DCLK	OA
83	EYESYNC	OA
84	EYECLKX	OA
85	EYECLK	OA
86	EYEX	OA
87	ADIN	R
88	DAOUT	R
89	0VD2	GND
90	EYEX	OA
91	GP21	IA/OB
92	0VD2	GND
93	GP20	IA/OB
94	GP19	IA/OB
95	RXD	OA
96	RLSD	OA
97	0VD2	GND
98	RCVO	R
99	SWGAINO	R
100	GP02	IA/OB

Notes:

1. NC = No connection; leave pin disconnected (open).
2. I/O Type: = Digital signals: see Table 9;
Analog signals: see Table 10.
3. R = Required modem inter-connection; no connection to host equipment.

(5) Image signal process block

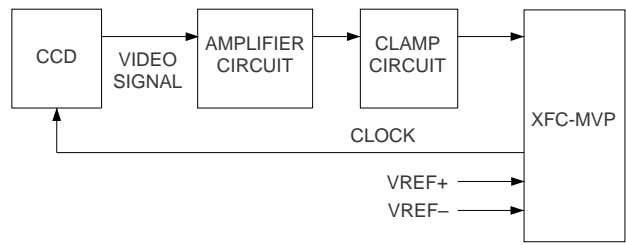


Fig. 5

The CCD is driven by the 1-chip engine (XFC-MVP), and the output video signal from the CCD is input into the XFC-MVP through the amplifying circuit and clamp circuit.
The ADC and buffer are provided in the XFC-MVP, and the digital image processing is performed.

[3] Circuit description of TEL/LIU PWB

(1) TEL/LIU block operational description

1) Block diagram

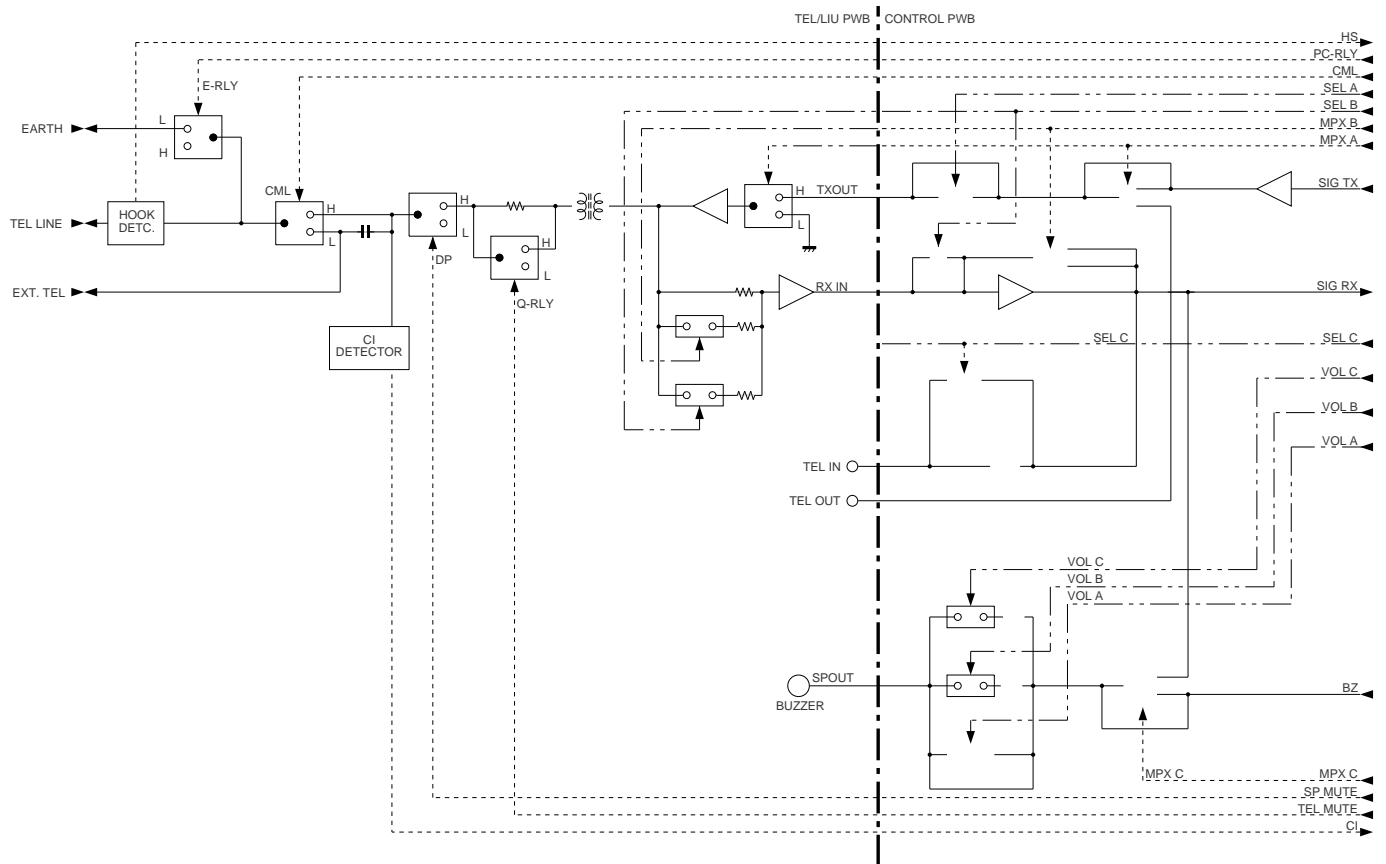


Fig. 6

2) Circuit description

The TEL/LIU PWB is composed of the following 9 blocks.

1. Surge protection circuit
2. External telephone hook status detection circuit
3. Dial pulse generation circuit
4. CML relay
5. Matching transformer
6. Buzzer circuit
7. Sensor circuit
8. CI detection circuit
9. Power supply and bias circuit

3) Block description

1. Surge Protection circuit

This circuit protects the circuit from the surge voltage occurring on the telephone line.

- The AR2,3 protects the circuit from the 500V or higher line surge voltages.

2. On-hook status detection circuit

The status of the hook of a telephone externally connected.

- External telephone hook status detection circuit (HS1)

This circuit comprises current sensor IC1.

When an external telephone is connected and enters the on-hook mode, the LED of photo-coupler PC1 emits light and the light receiving element turns on. The status signal $\overline{\text{HS1}}$ is input to the pin 84 of (XFC-MVP) (IC3: control PWB).

HS1 HIGH: EXT. TEL OFF-HOOK

HS1 LOW: EXT. TEL ON-HOOK

3. Dial pulse generation circuit

The pulse dial generation circuit comprises the PC2.

4. CML relay

The CML relay switches over connection to the matching transformer T1 while the FAX or built-in telephone is being used.

5. Matching transformer

The matching transformer performs electrical insulation from the telephone line and impedance matching for transmitting the TEL/FAX signal.

6. Buzzer circuit

Outputs the buzzer sound generated from the XFC-MVP (IC3: control PWB).

7. Sensor circuit

For the recording paper sensor (P.E), when there is recording paper, the photo transistor in the light receiving side is ON and the detection level is LOW. When there is no recording paper, the photo transistor in the light receiving side is OFF and the detection level is HIGH.

8. CI detection circuit

The CI detection circuit detects the CI signals of 13 Hz to more, A CI signal, which is provided to the photo-coupler PC3 through the C13 (1 μF), R4 (10 K), and ZD7 when the ring signal is inputted from the telephone line, is filtered by the R129 and C113, and then transmitted to the control PWB through the Q103.

9. Power supply and bias circuits

The voltages of +24V and +5V are supplied from the control PWB unit.

(Example: Fax signal send)

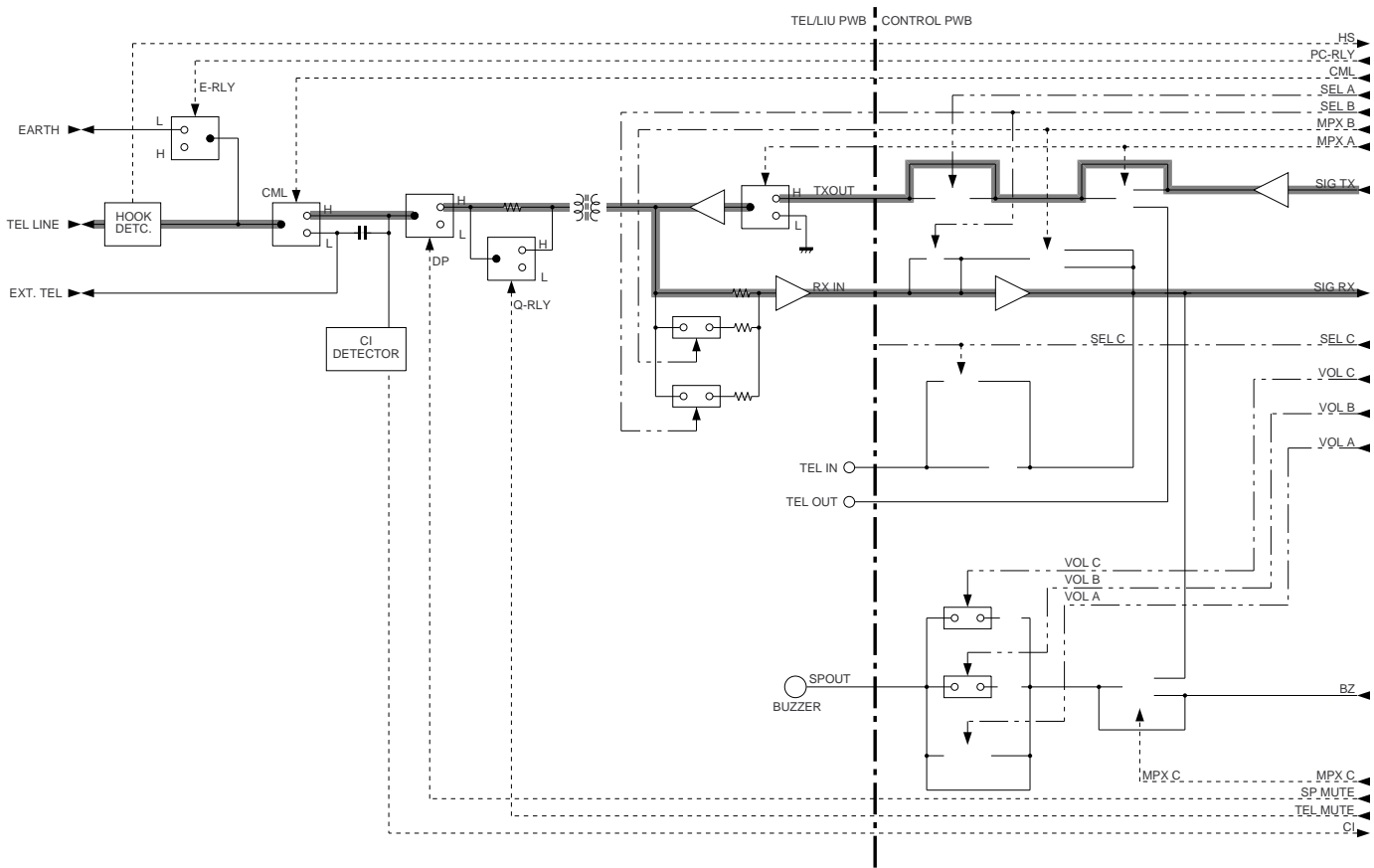


Fig. 7

[4] Circuit description of power supply PWB

1. Block diagram

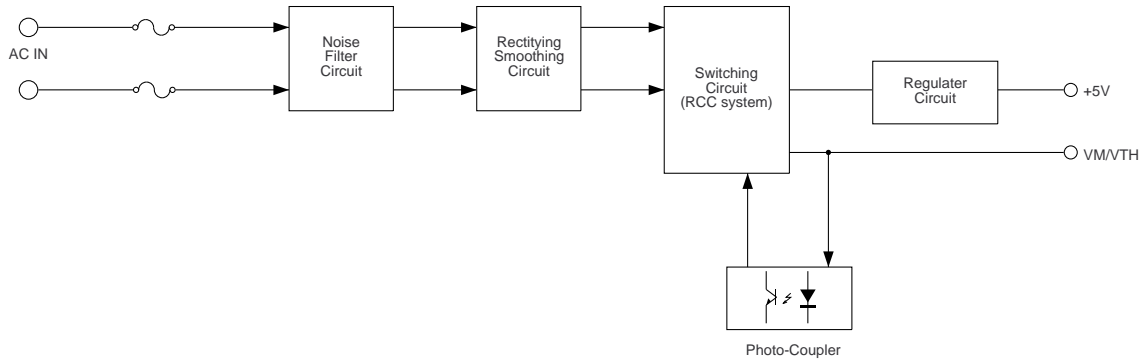


Fig. 8

2-1. Noise filter circuit

The input noise filter section is composed of L and C, which reduces normal mode noise from the AC line and common mode noise to the AC line.

2-2. Rectifying/smoothing circuit

The AC input voltage is rectified by diode D6 ~ D9 and smoothed by capacitor C5 to supply DC voltage to the switching circuit section.

Power thermistor TH1 suppresses inrush current at power switch-on.

2-3. Switching circuit

This circuit employs the self excited ringing choke convertor (RCC) system. In this system, the DC voltage supplied from the rectifying/smoothing section is converted into high frequency pulses by ON/OFF repetition of MOS FET Q1.

Energy is charged in the primary winding of T1 during ON period of Q1, and discharged to the secondary winding during OFF period.

The output voltage is controlled by adjusting ON period of Q1 which changes charge time of C9 through operation of photo-coupler PC1A from 24V output.

The overcurrent protection is performed by bringing Q1 to OFF state through detection of voltage increase in the auxiliary winding of T1 by ZD2 and R11.

The overvoltage protection is performed by operating the overcurrent protection circuit through destruction of zener diode ZD4 and short-circuiting of load.

2-4. +5V circuit

Each DC voltage supplied by rectifying the output of transformer T1 with diode D5 is stabilized by 3-terminal regulator IC2.

[5] Circuit description of CCD PWB

The CCD board picks up optical information from the document, converts it into an electrical (analog) signal and transfers it to the control board.

(1) Block diagram

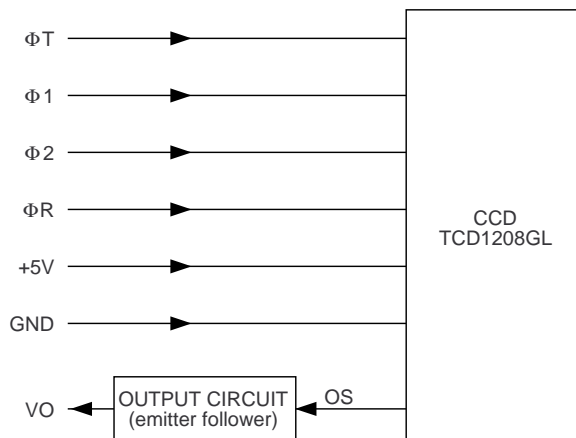


Fig. 9

(2) Description of blocks

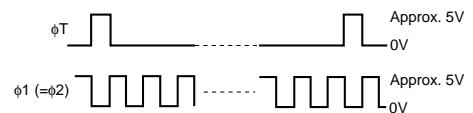
1. CCD

The TCD1208GL is a highly sensitive charged coupled image sensor that consists of 2160 picture elements.

Receiving four drive signal (ϕT , $\phi 2$, $\phi 1$, ϕR) from the control board, the transferred photoelectric analog signal OS is impedance converted, and the signal VO, is supplied to the control board.

2. Waveforms

1. $\phi 1$, $\phi 2$ ($=\phi 1$) signals within the control board.



2. OS ϕ

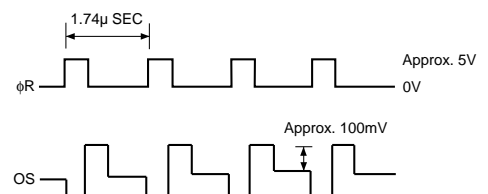
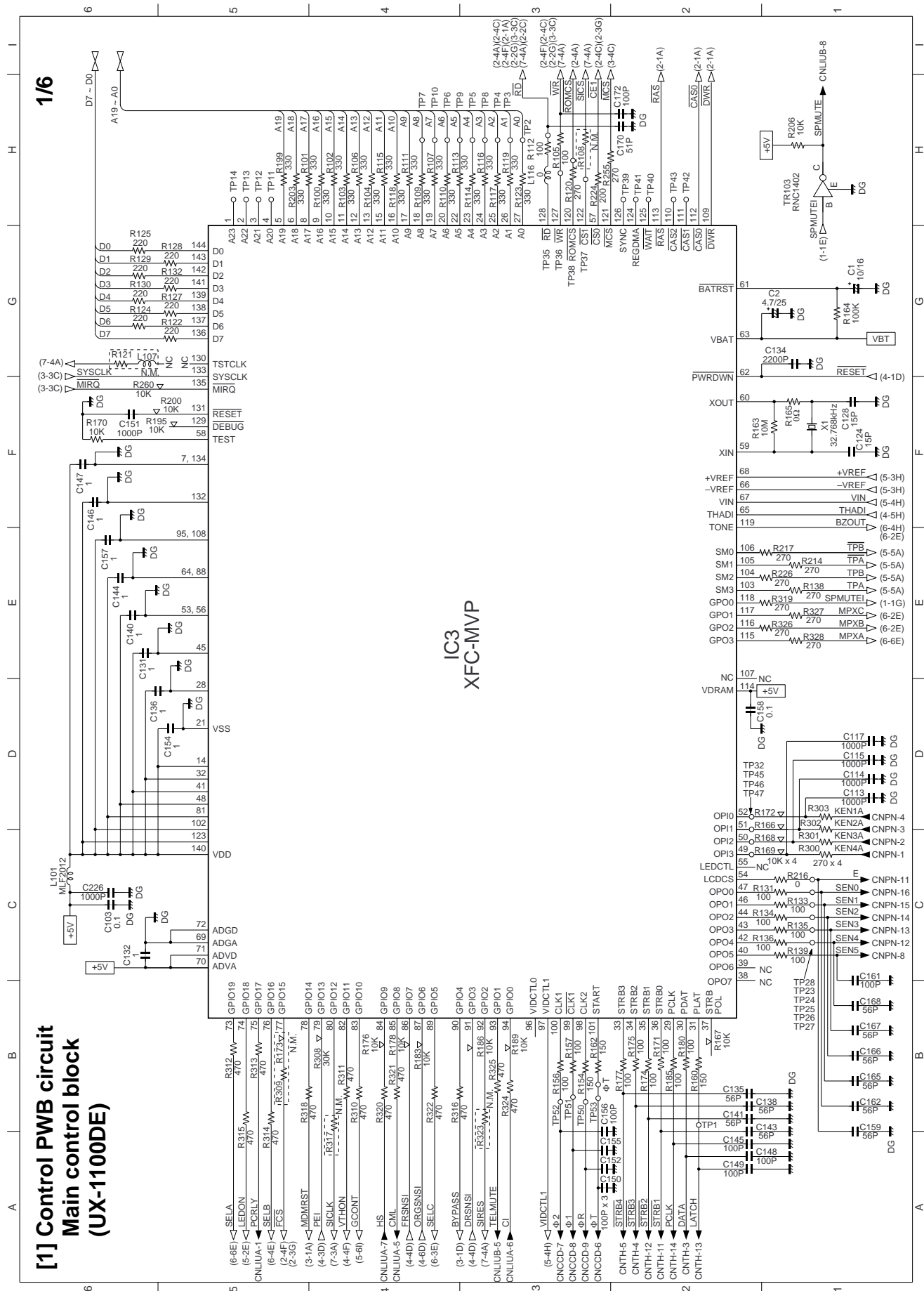


Fig. 10

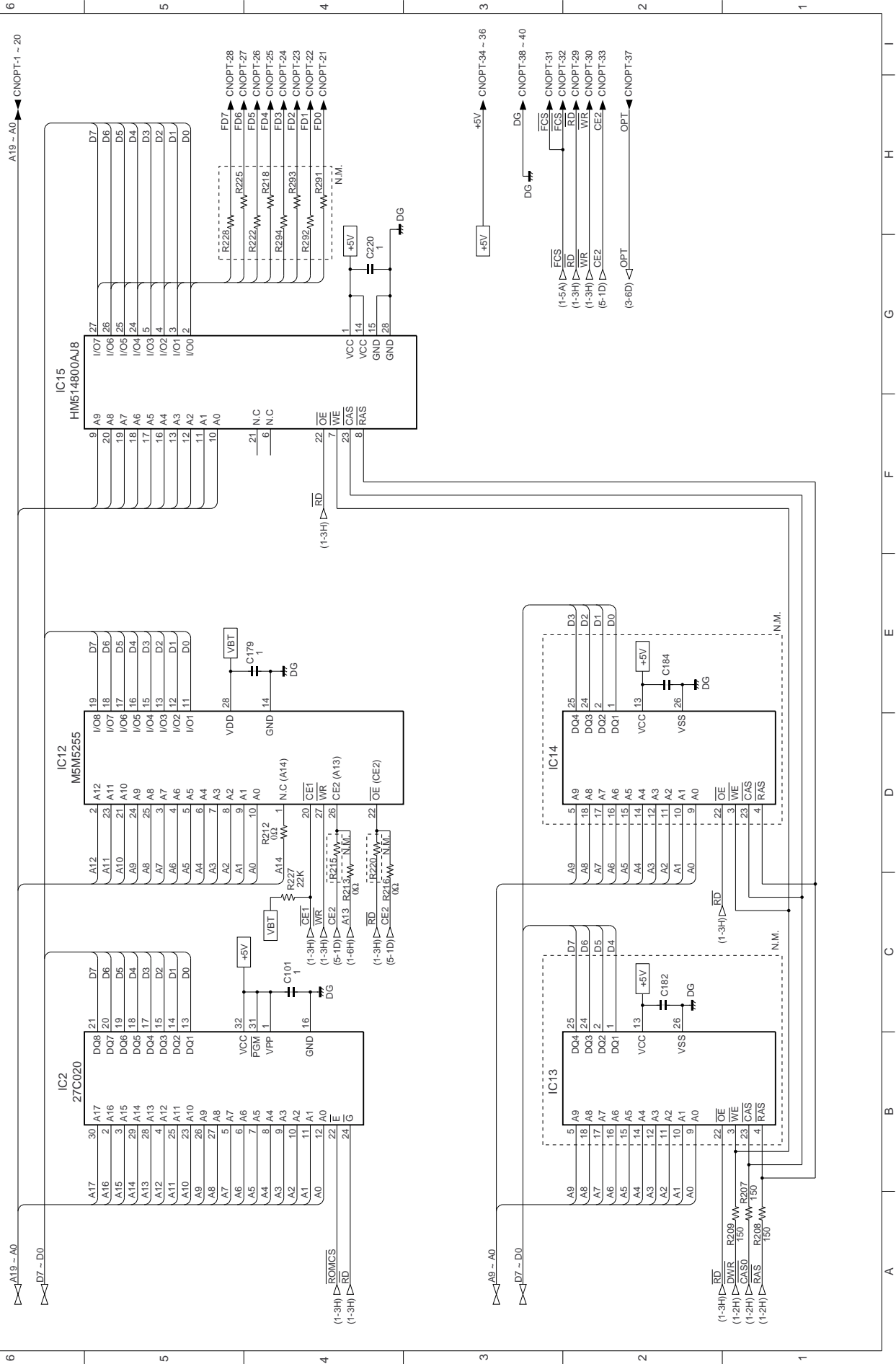
CHAPTER 6. CIRCUIT SCHEMATICS AND PARTS LAYOUT

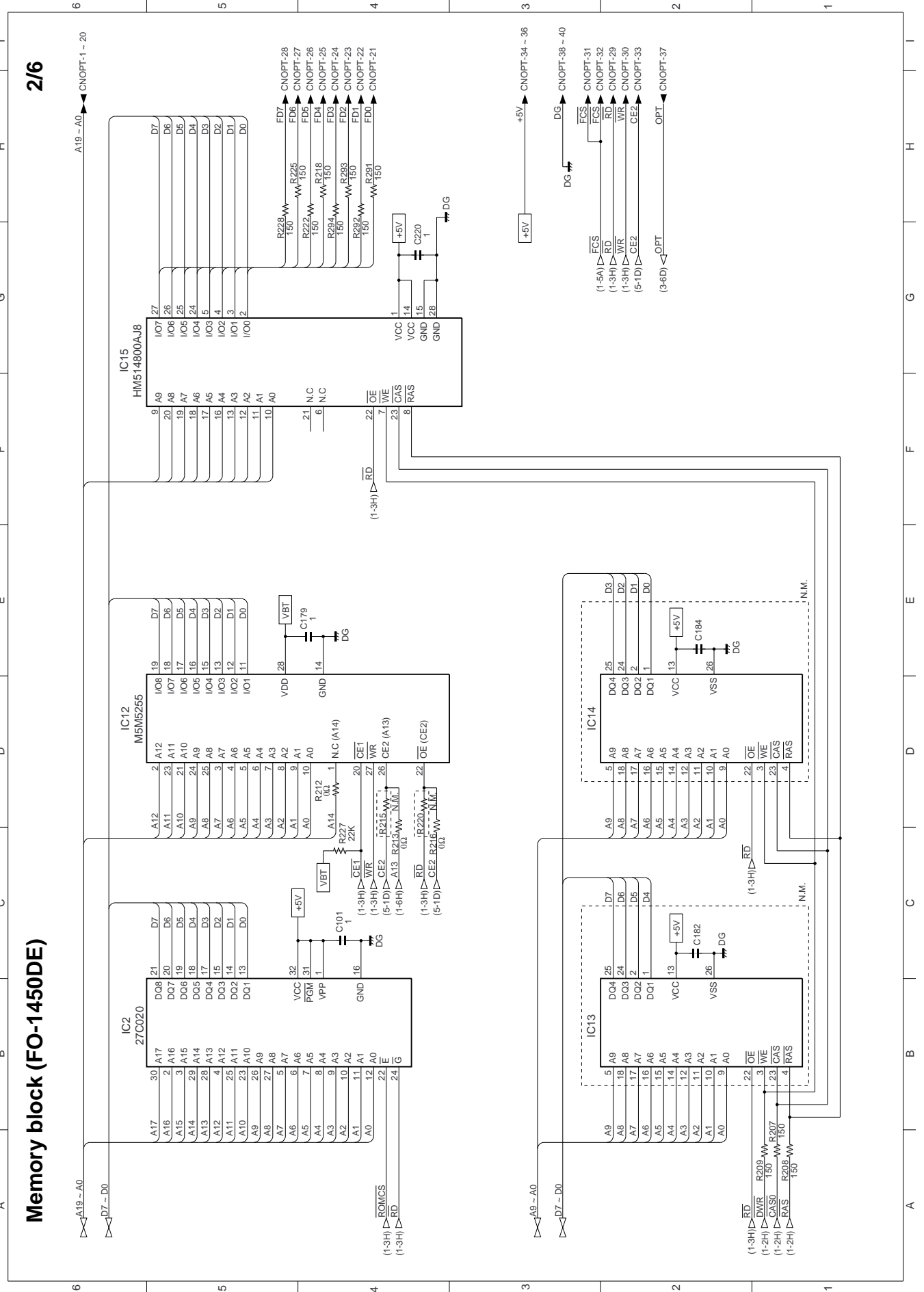


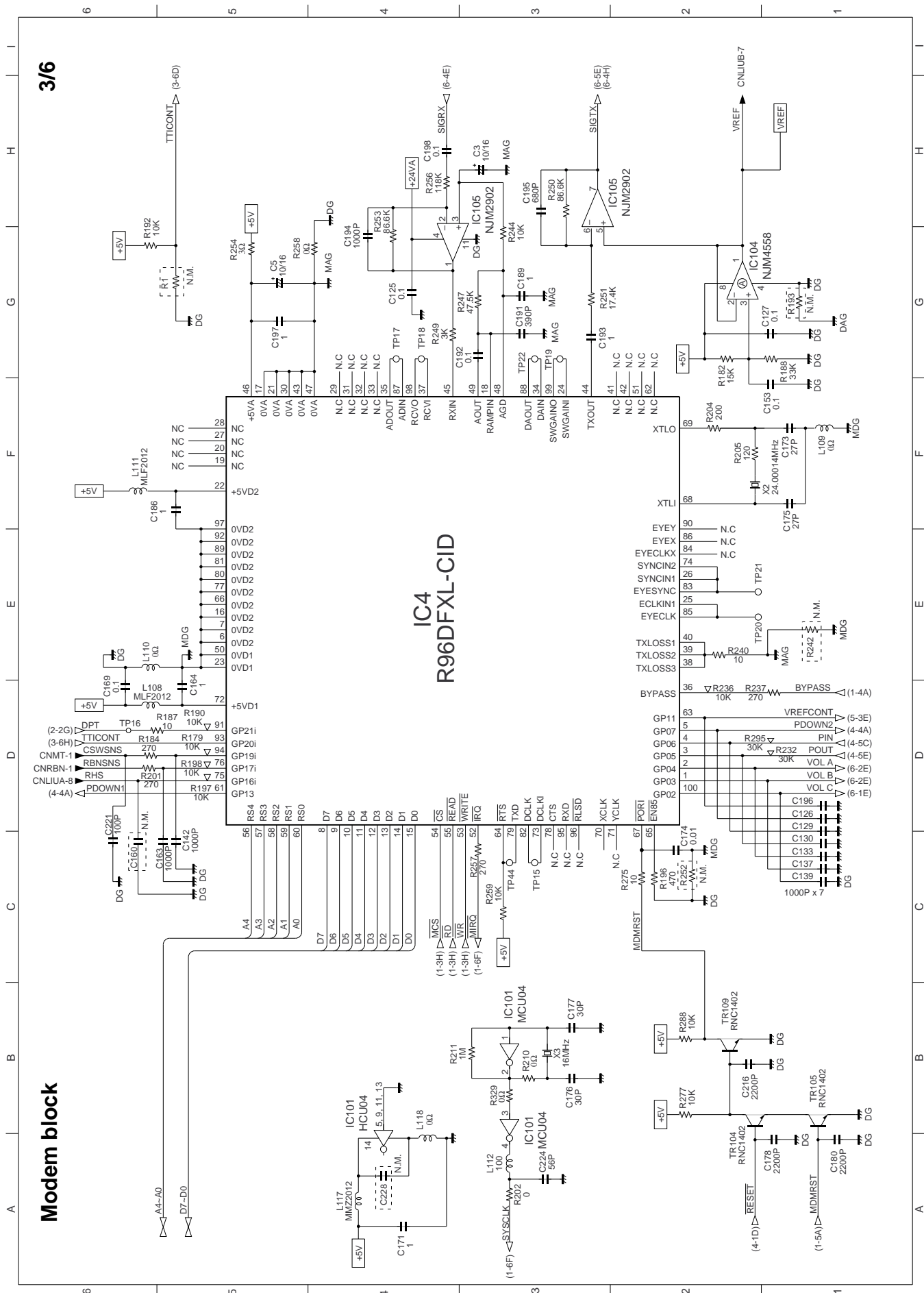


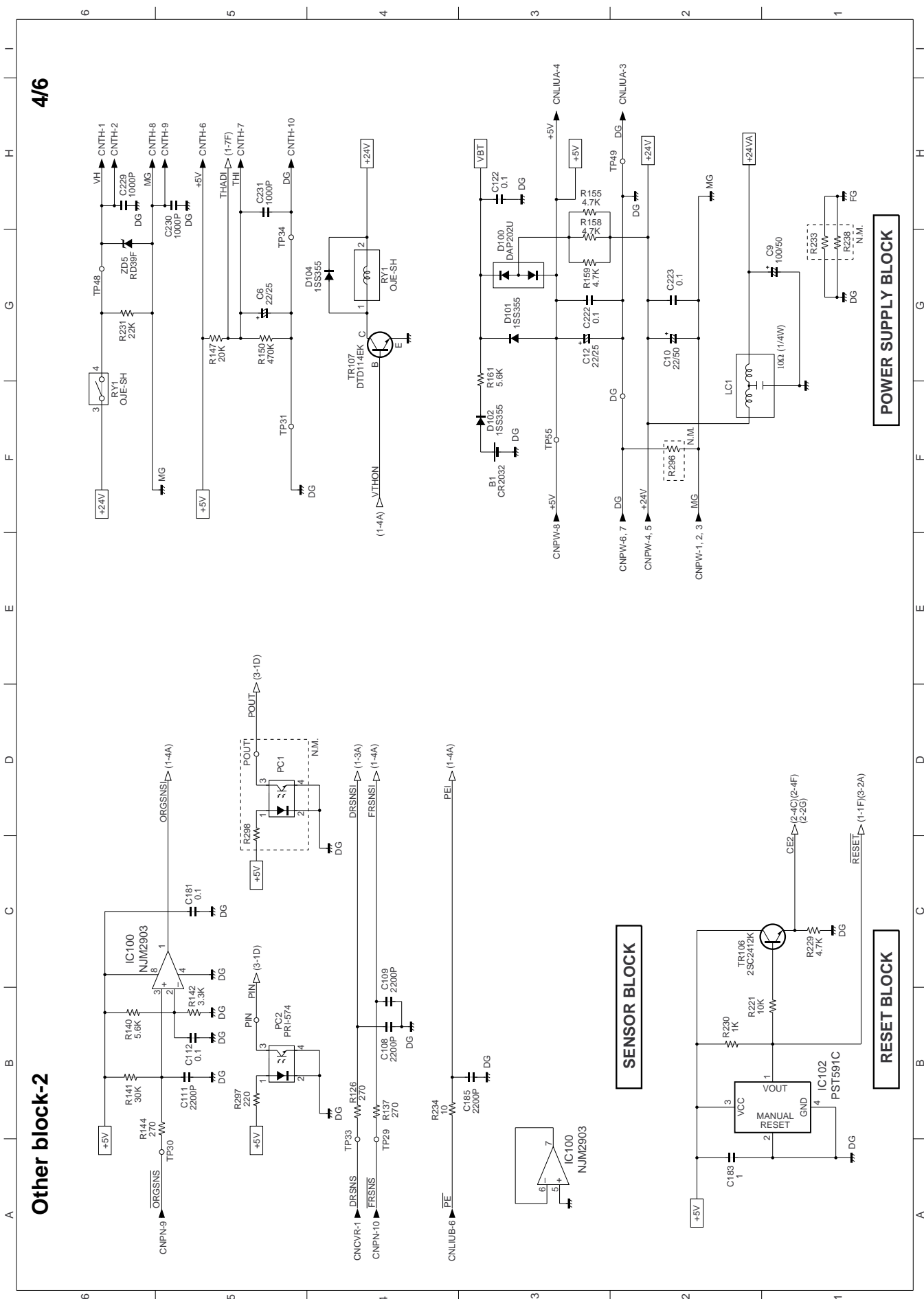
Memory block (UX-1100DE)

2/6



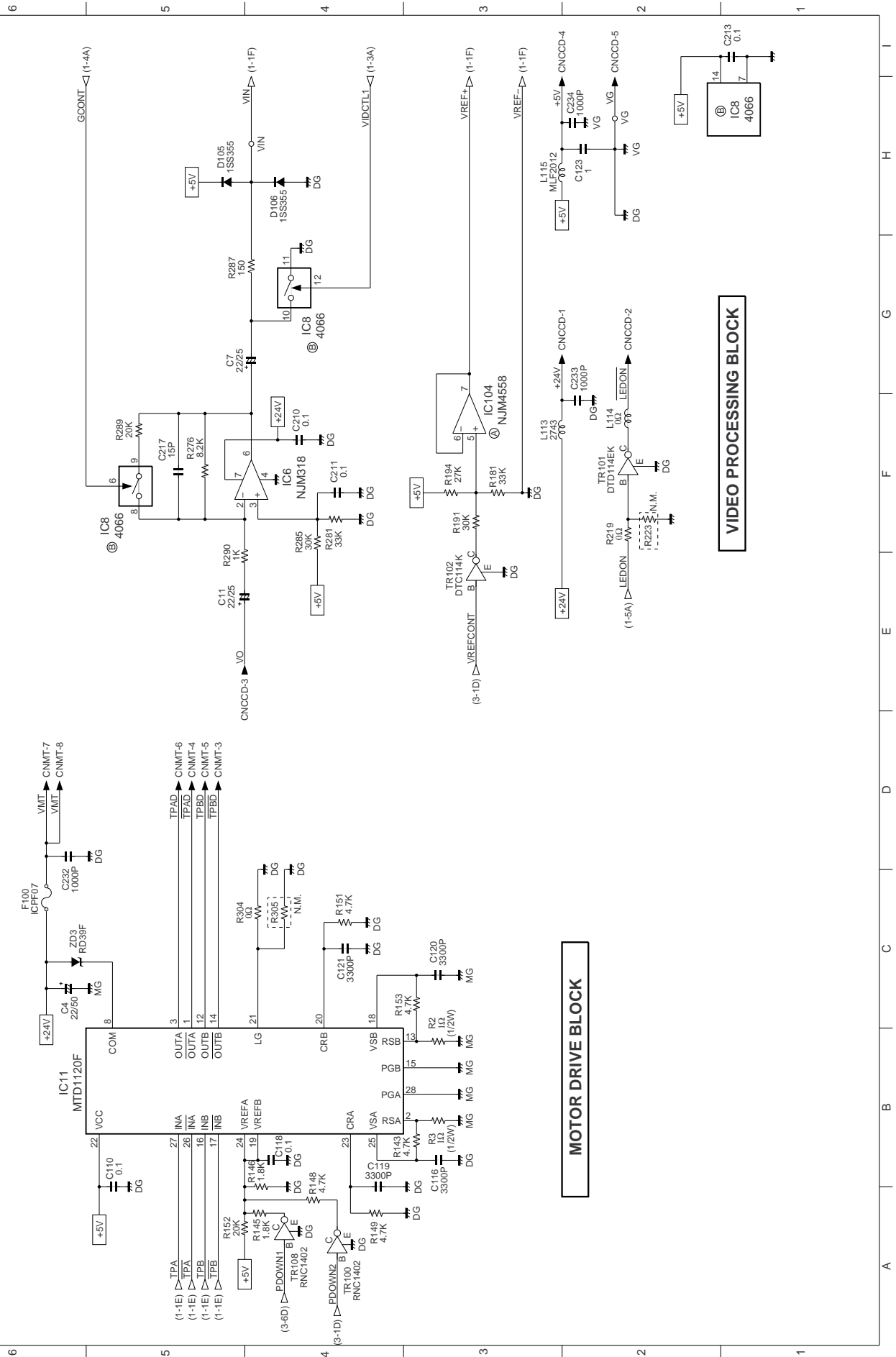






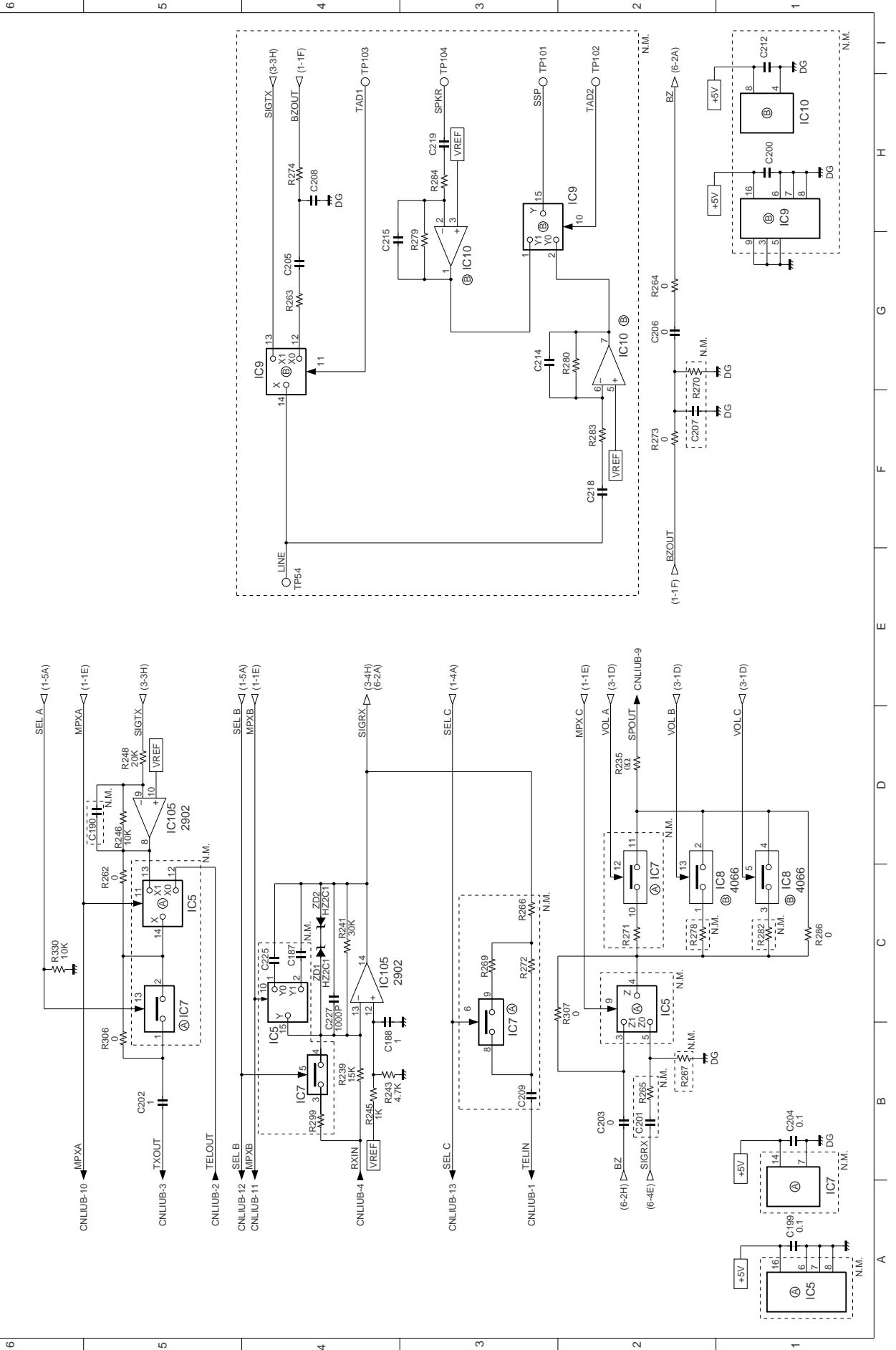
Other block-1

5/6

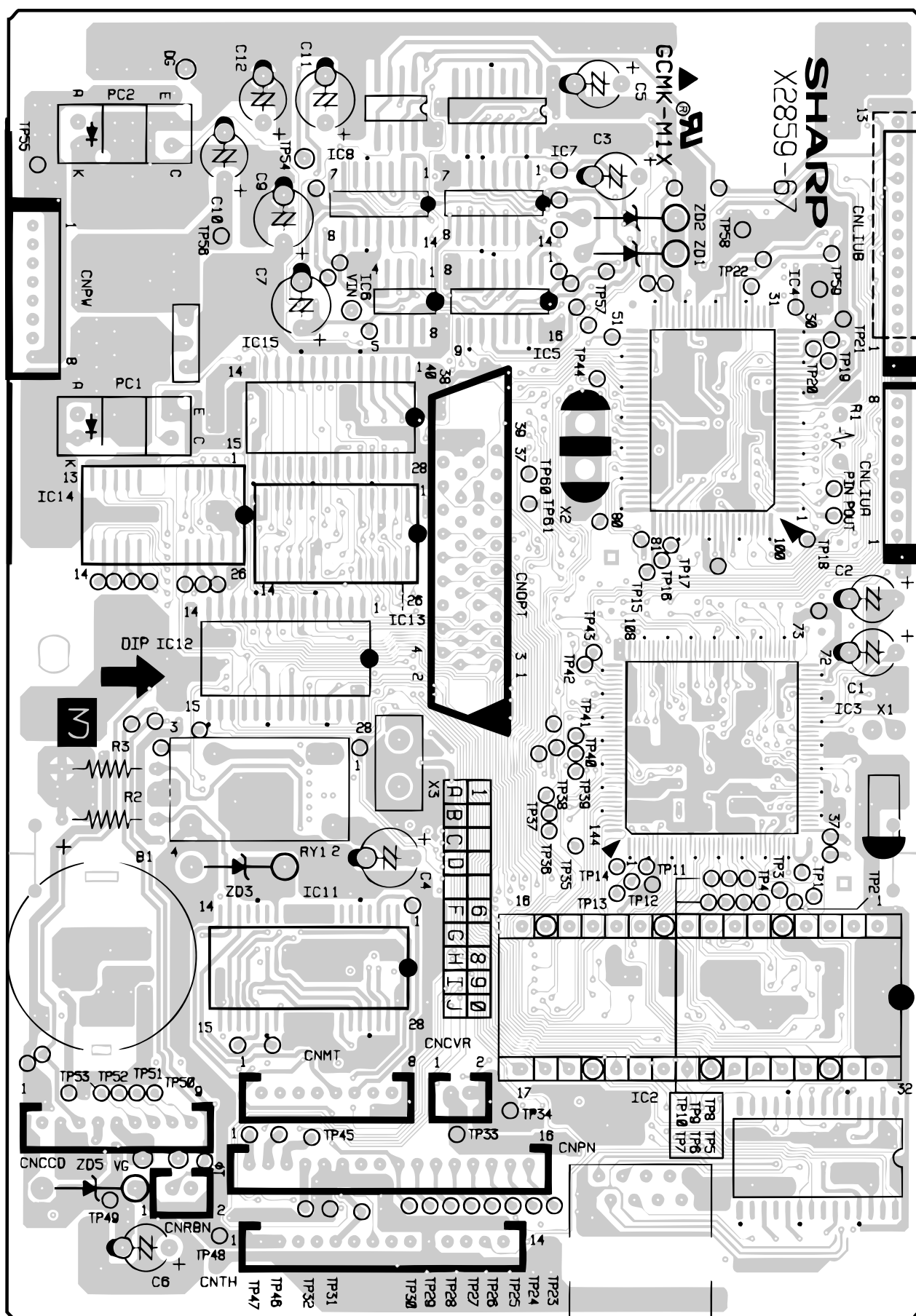


Analog signal select block

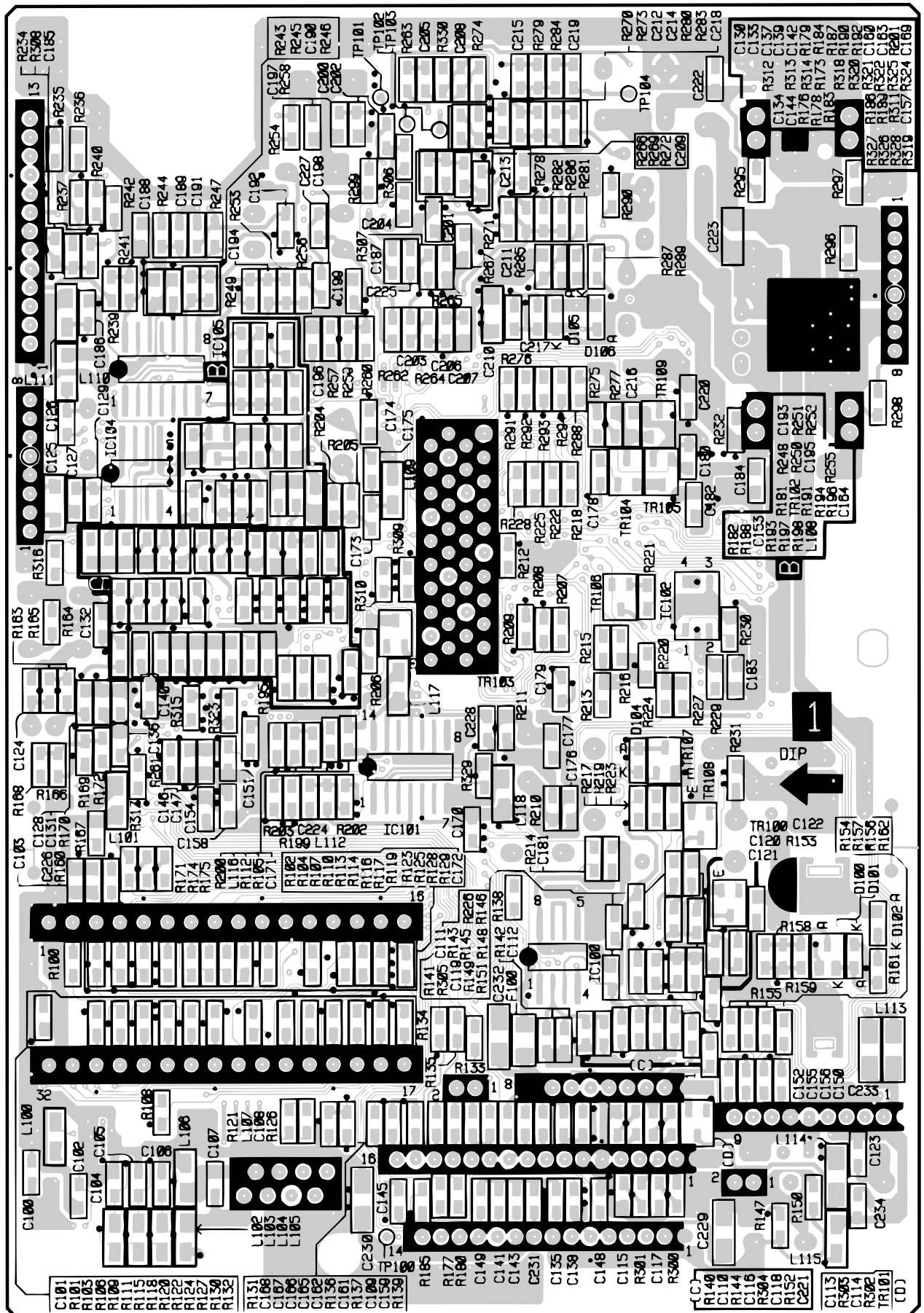
6/6



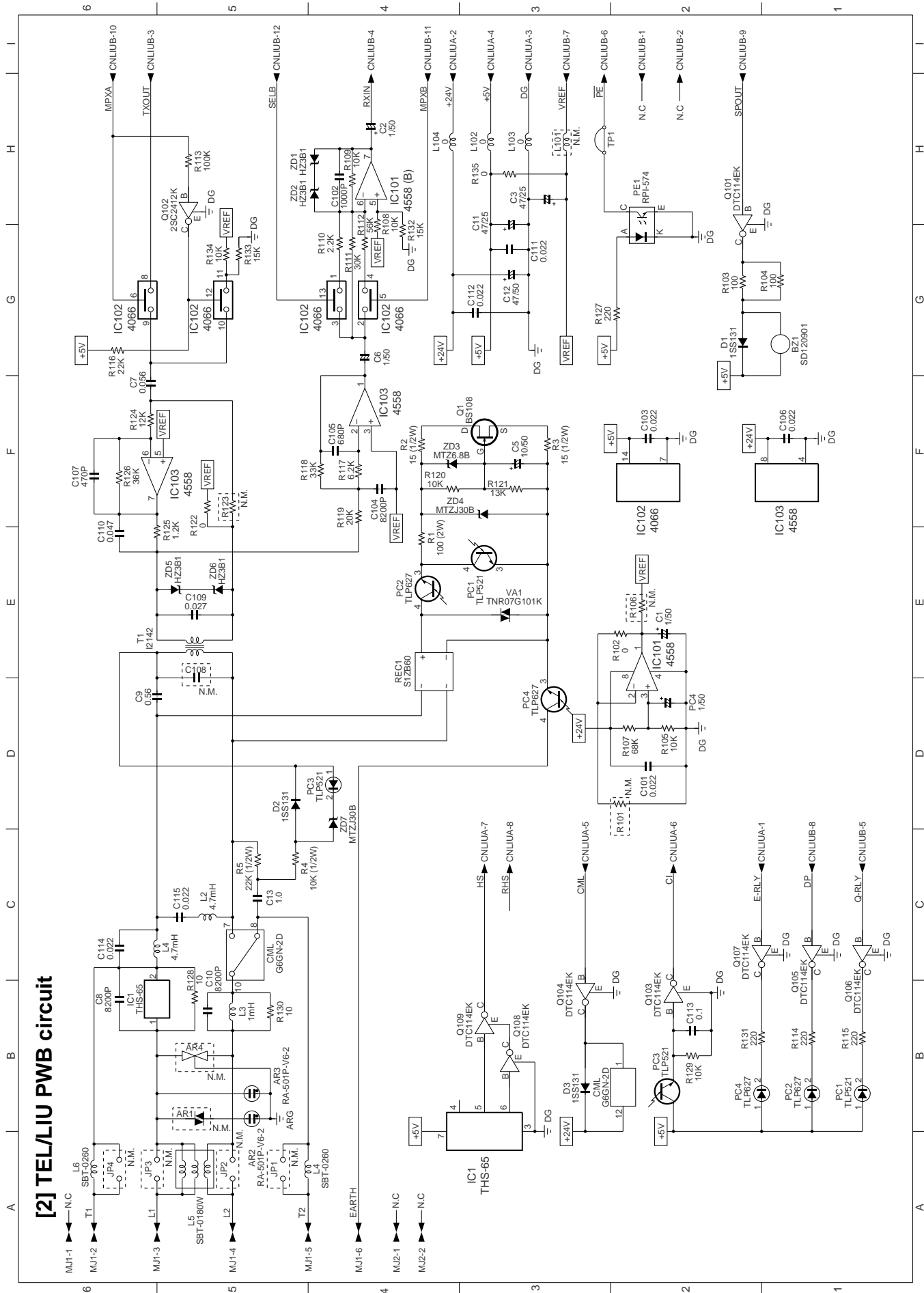
Control PWB parts layout (Top side)



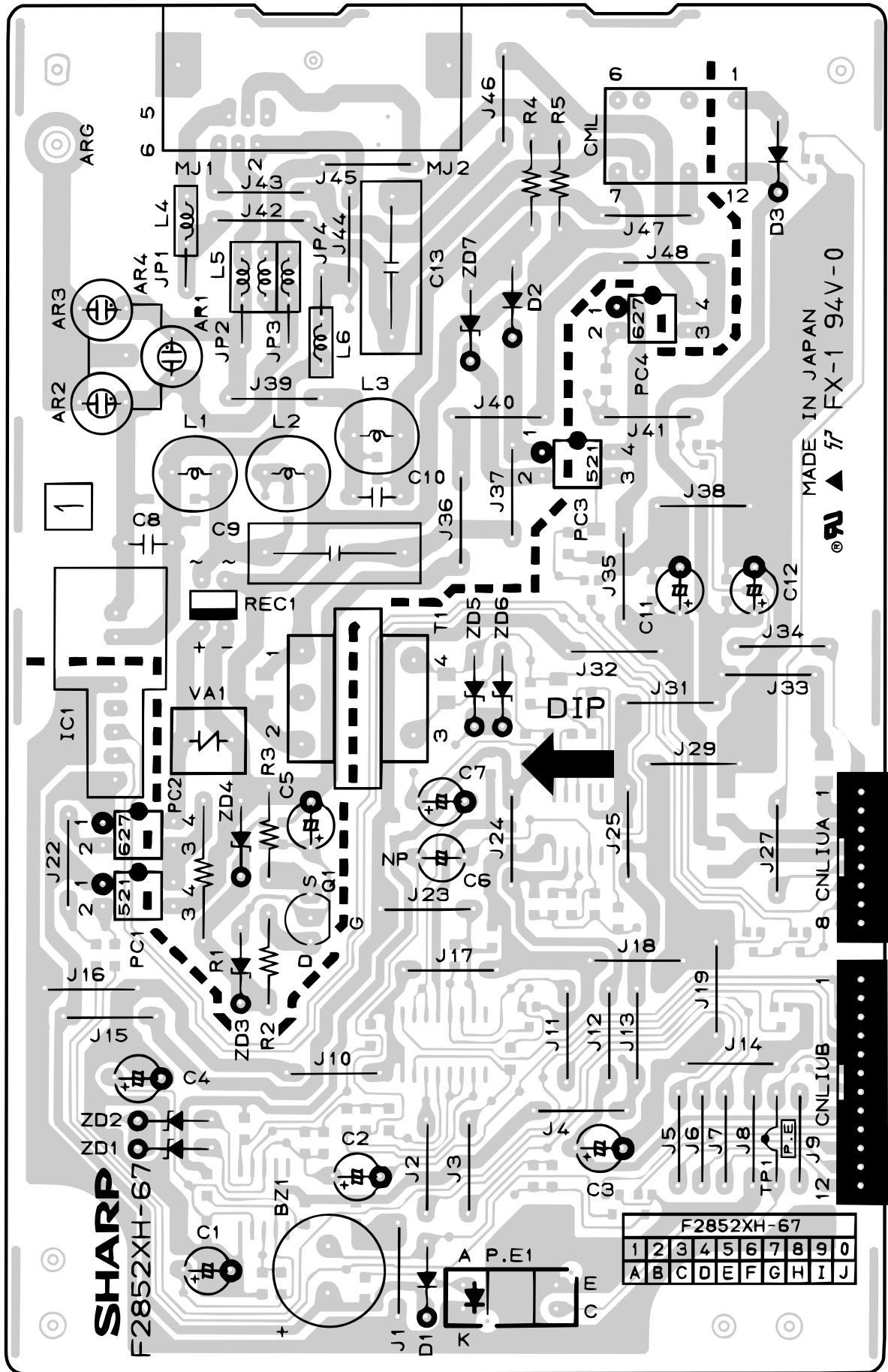
Control PWB parts layout (Bottom side)



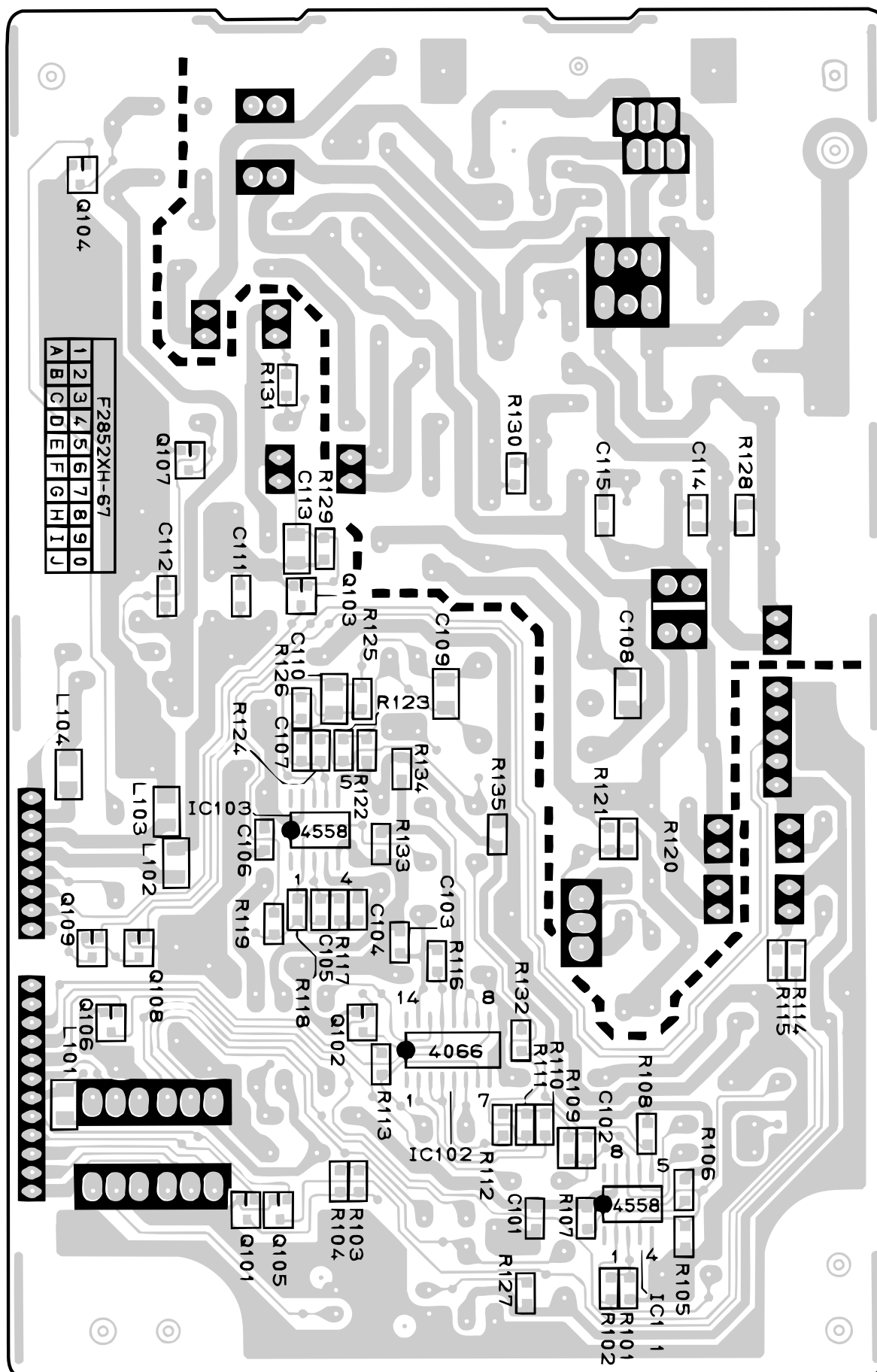
[2] TEL/LIU PWB circuit



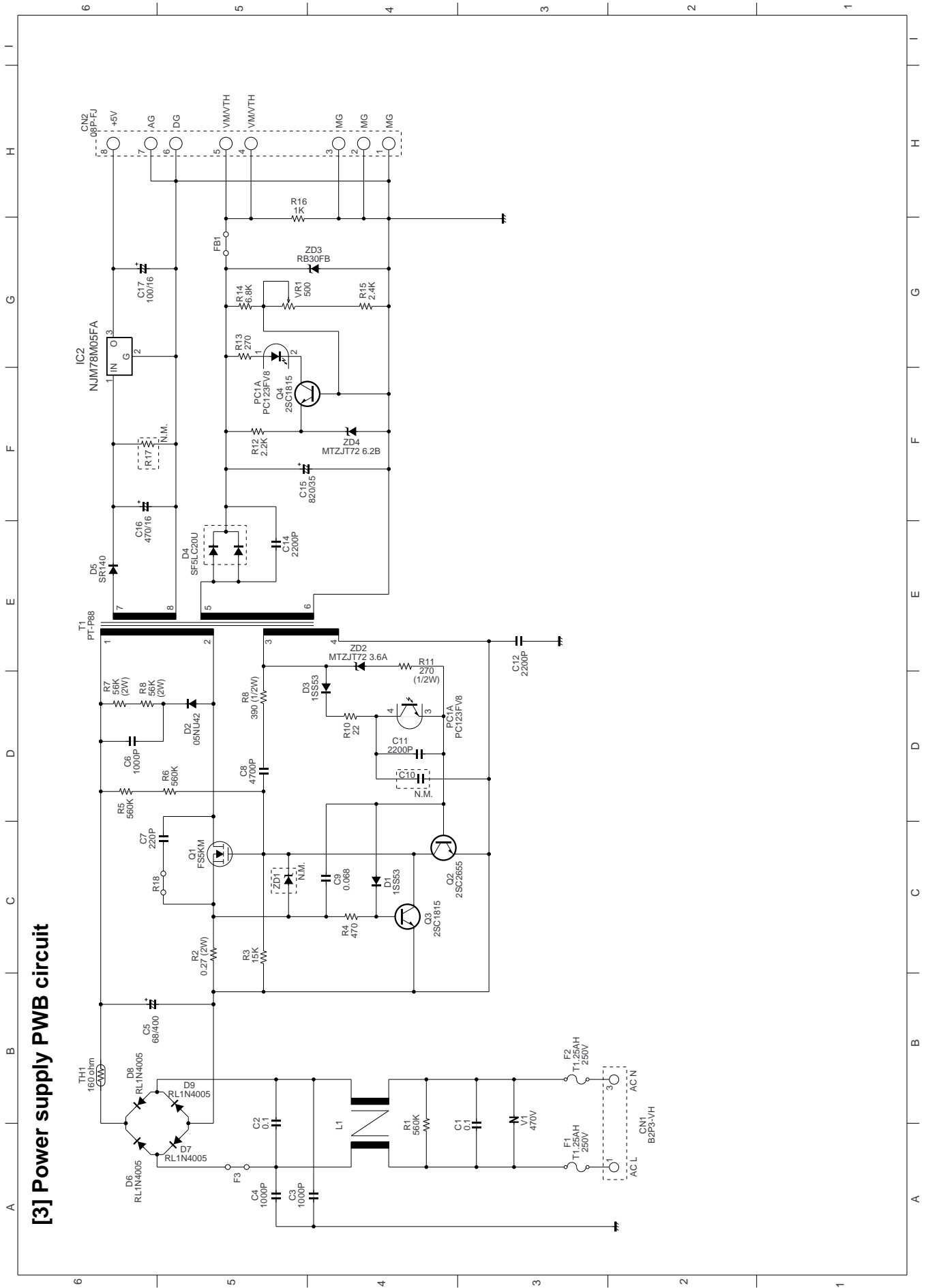
TEL/LIU PWB parts layout (Top side)



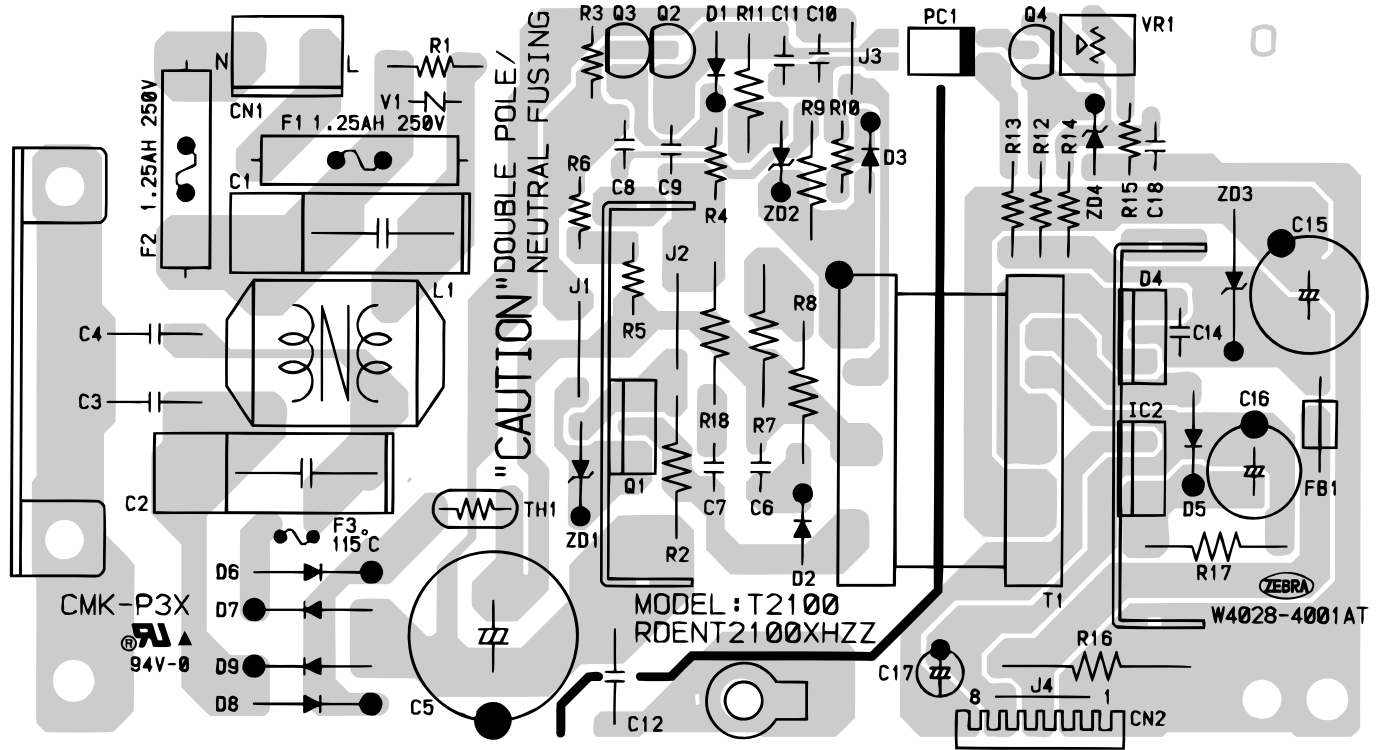
TEL/LIU PWB parts layout (Bottom side)



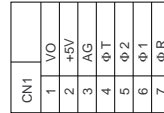
[3] Power supply PWB circuit



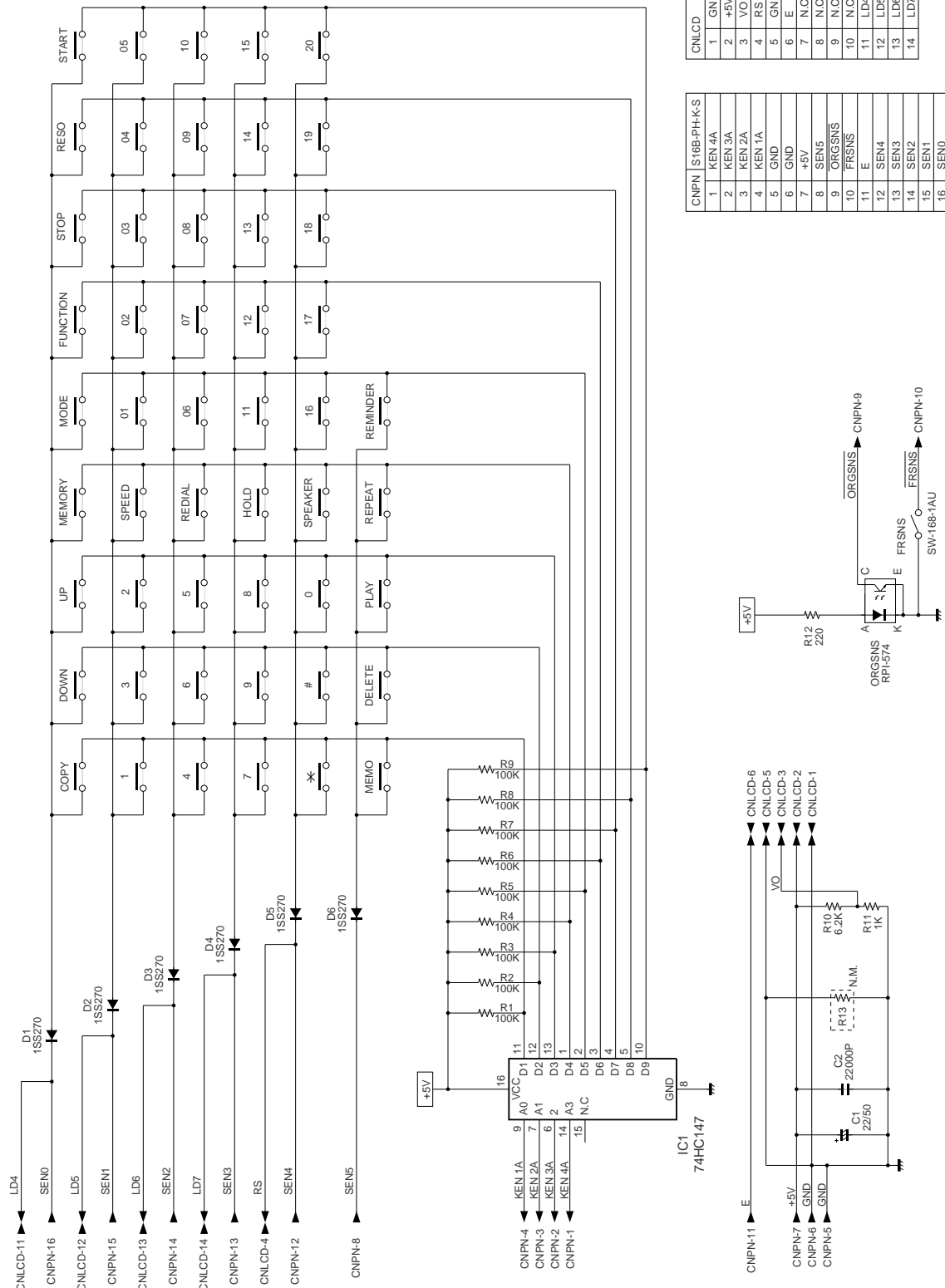
Power supply PWB parts layout



CCD PWB parts layout

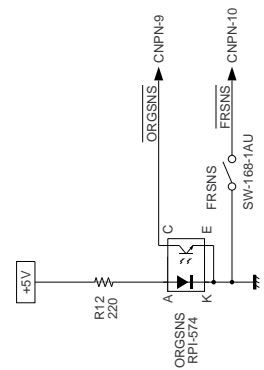


[5] Operation panel PWB circuit

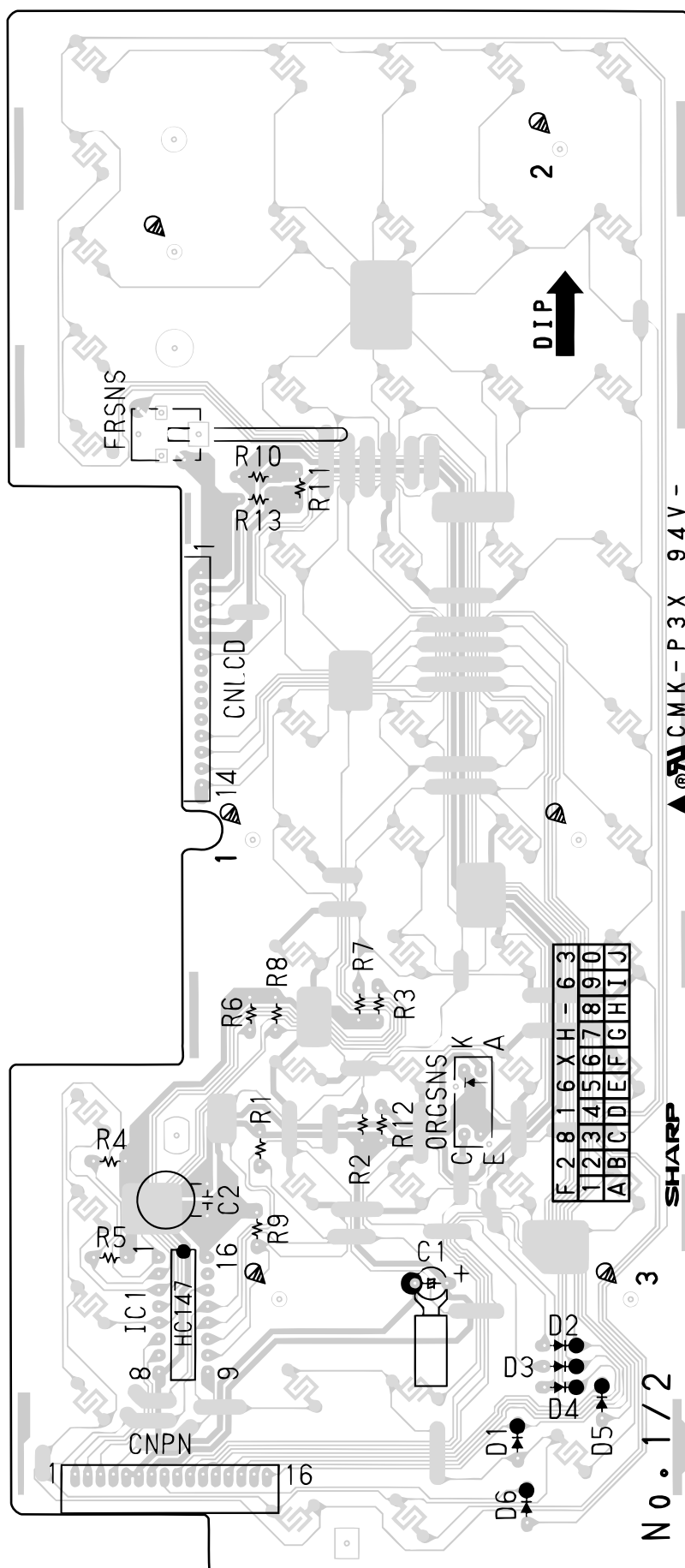


CNPIN	S16B-PH-K-S
1	KEN 4A
2	KEN 3A
3	KEN 2A
4	KEN 1A
5	GND
6	GND
7	+5V
8	SEN5
9	FRSNS
10	FRSNS
11	E
12	SEN4
13	SEN3
14	SEN2
15	SEN1
16	SEN0

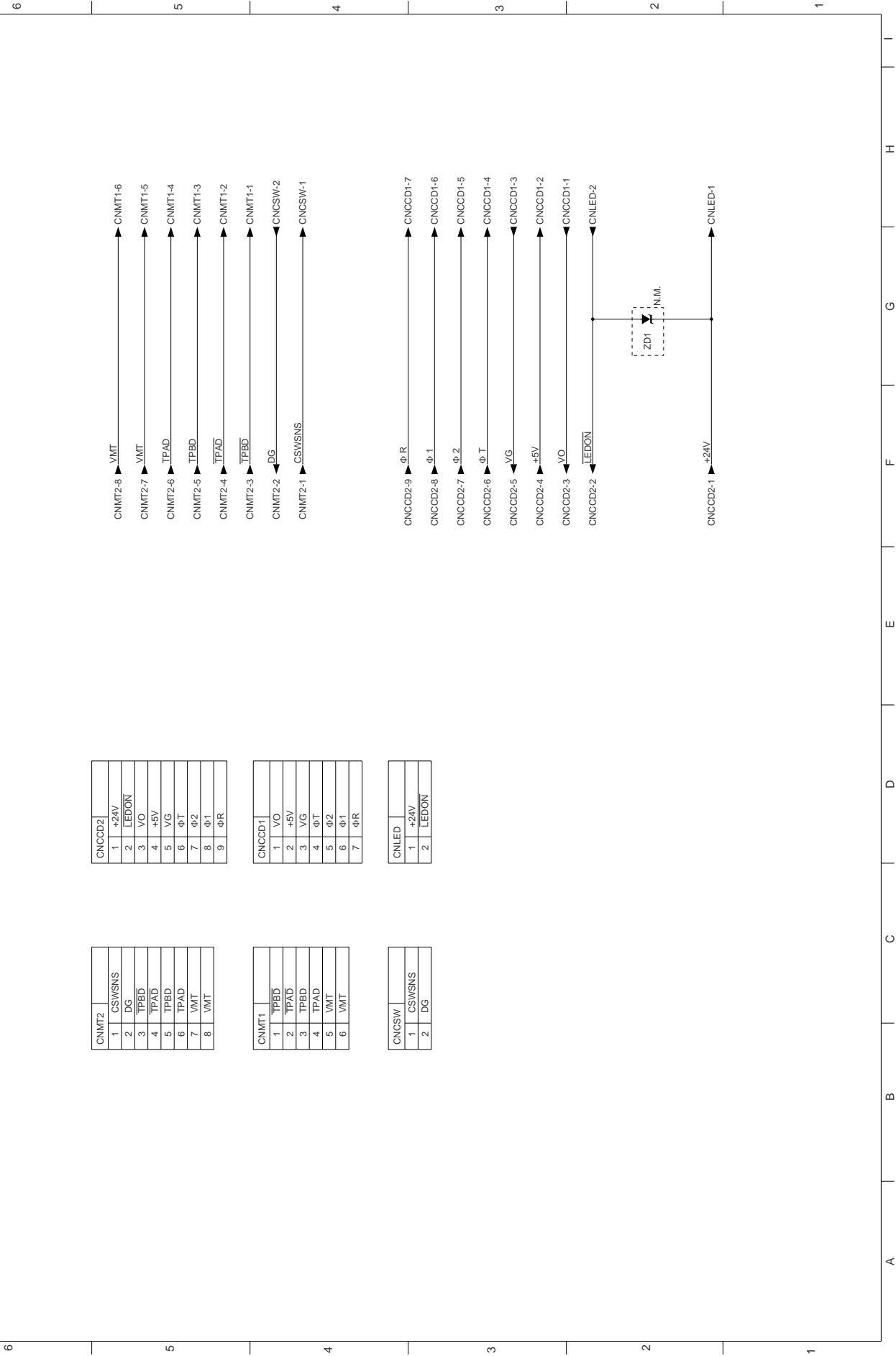
CNLCD	
1	GND
2	+5V
3	VO
4	RS
5	GND
6	E
7	N.C
8	N.C
9	N.C
10	N.C
11	LD4
12	LD5
13	LD6
14	LD7



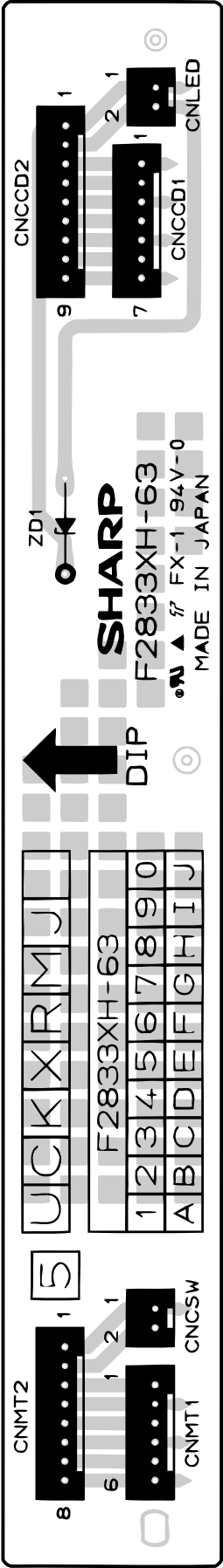
Operation panel PWB parts layout



[6] Joint PWB circuit

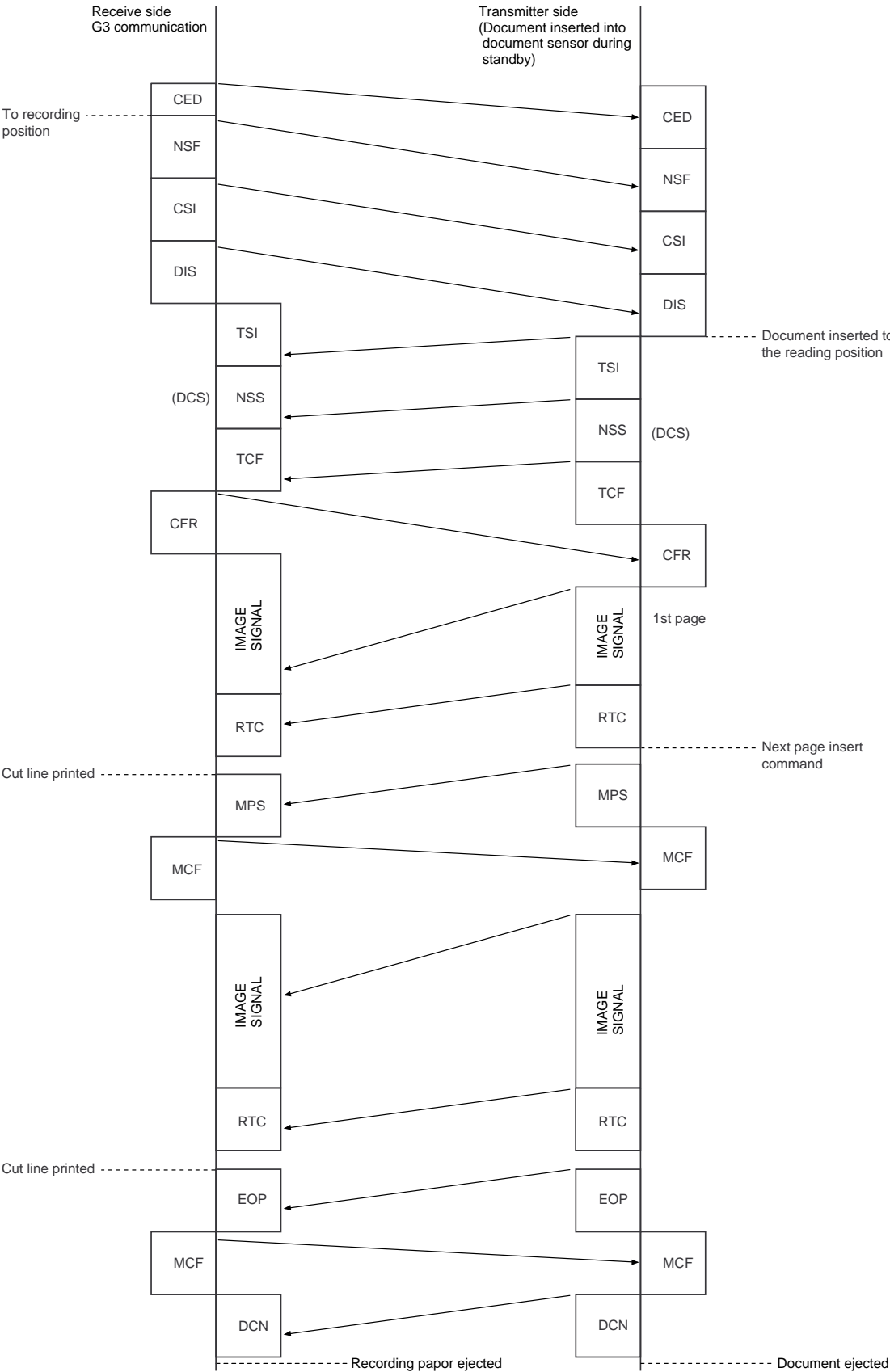


Joint PWB parts layout

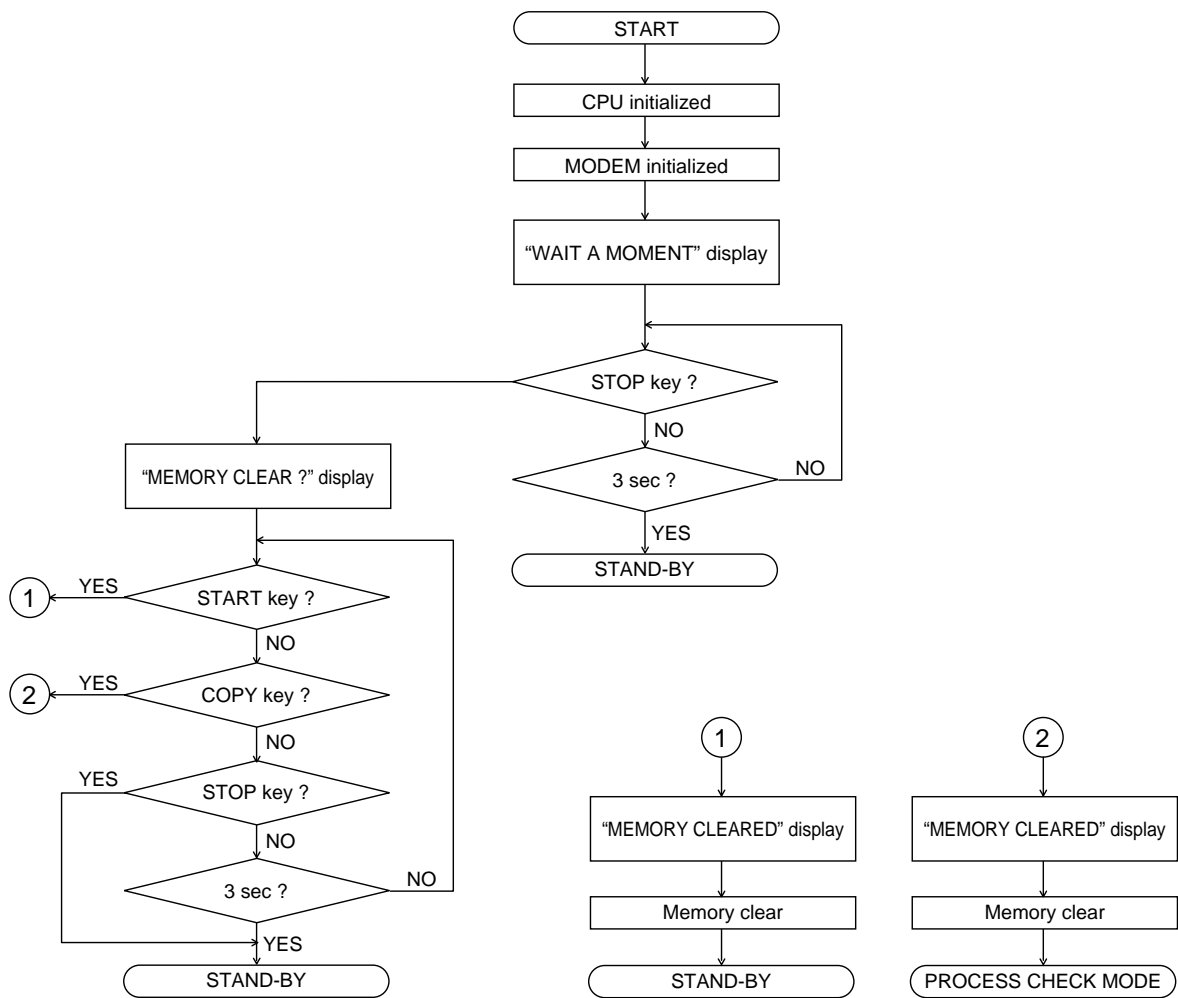


CHAPTER 7. OPERATION FLOWCHART

[1] Protocol



[2] Power on sequence



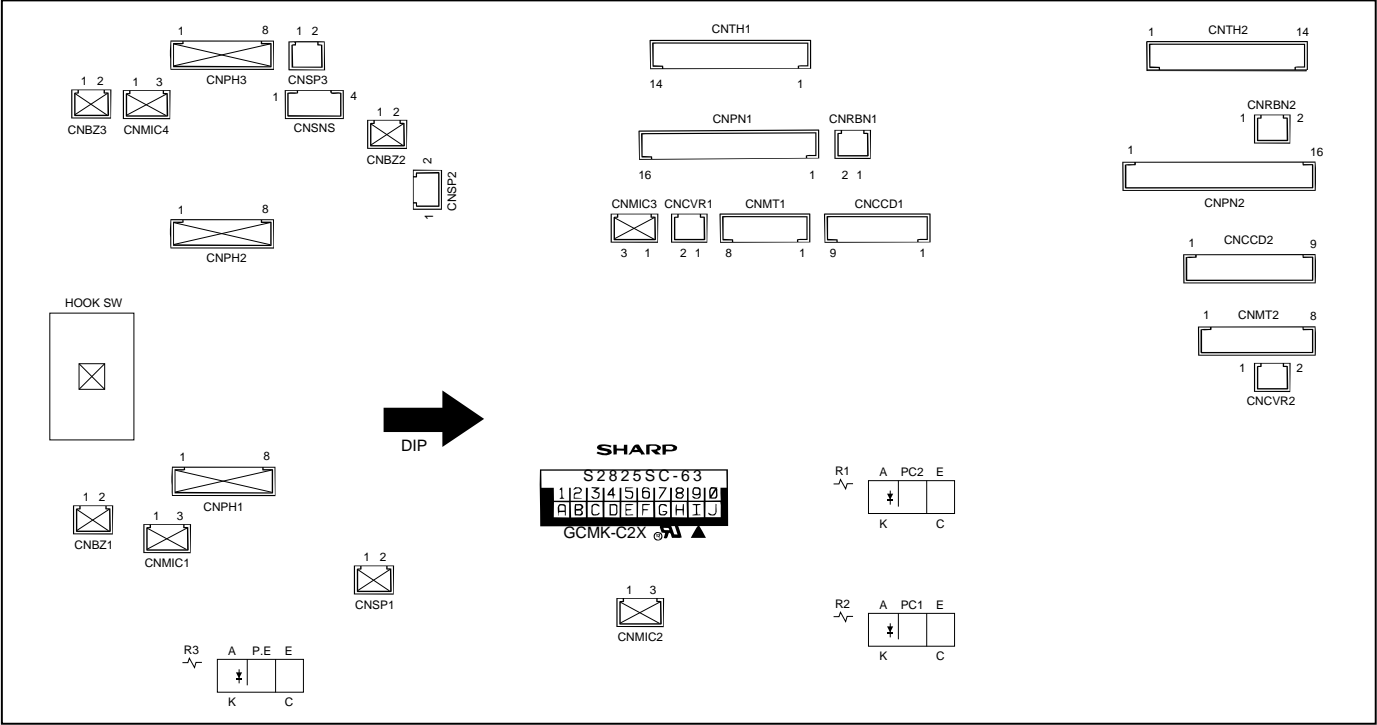
CHAPTER 8. OTHERS

[1] Service tools

1. List

NO.	PARTS CODE	DESCRIPTION	Q'TY	PRICE RANK
1	CPWBS2825SC01	Extension board unit	1	CE
2	UKOGM2057SCZZ	Optical adjustment jig	1	BR

Extension board unit

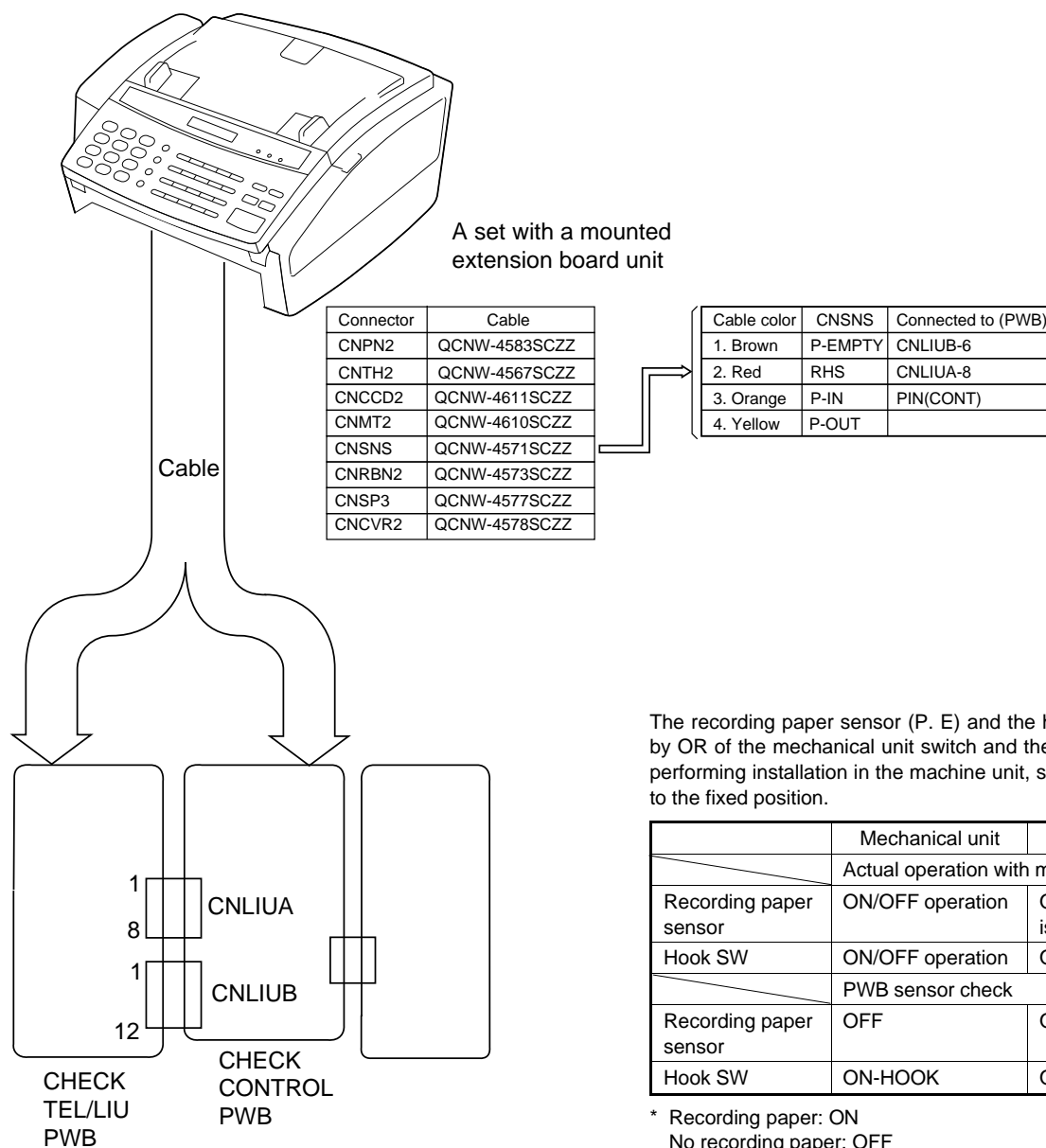


NO.	PARTS CODE	DESCRIPTION	Q'TY	PRICE RANK
1	QCNW-4567SCZZ	CABLE (CNTH2)	1	AQ
2	QCNW-4571SCZZ	CABLE (CNSNS)	1	AX
3	QCNW-4573SCZZ	CABLE (CNRBN2)	1	AF
4	QCNW-4578SCZZ	CABLE (CNCVR2)	1	AF
5	QCNW-4610SCZZ	CABLE (CNMT2)	1	AL
6	QCNW-4583SCZZ	CABLE (CNPN2)	1	AQ
7	QCNW-4611SCZZ	CABLE (CNCCD2)	1	AL
8	QCNW-4577SCZZ	CABLE (CNSP3)	1	AF
9	QCNCM7014SC0H	CONNECTOR (CNMT1, CNMT2)	2	AB
10	QCNCM7014SC0B	CONNECTOR (CNRBN1, CNRBN2)	2	AD
11	QCNCM2401SC0B	CONNECTOR (CNSP2, CNSP3)	2	AA
12	QCNCM7014SC0I	CONNECTOR (CNCCD1, CNCCD2)	2	AB
13	QCNCM2442SC0B	CONNECTOR (CNCVR1, CNCVR2)	2	AB
14	QCNCM7014SC0D	CONNECTOR (CNSNS)	1	AB
15	QCNCM7014SC1F	CONNECTOR (CNPN1, CNPN2)	2	AD
16	QCNCM7014SC1D	CONNECTOR (CNTH1, CNTH2)	2	AC
17	QSW-Z2206SCZZ	HOOK SWITCH	1	AH
18	VHPRPI-574///	(PC1, PC2, P. E)	3	AF
19	VRD-RC2EY221J	RESISTOR (1/4W 220Ω ±5%) (R1, R2, R3)	3	AA

2. Description

2-1. Extension board unit

1. Remove the TEL/LIU PWB, control PWB and Power Supply PWB from this unit, and mount the extension board unit instead.
 - Before connecting the wiring to the extension board unit, set the test PWB switches to the fixed position.
2. The setting is as follows.



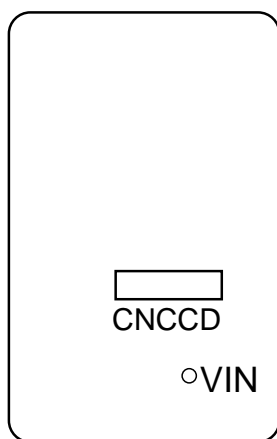
2-2. Scan optical system adjustment

(1) Outline

The adjustment procedures of the scan optical system are described below:

(2) Adjustment procedures

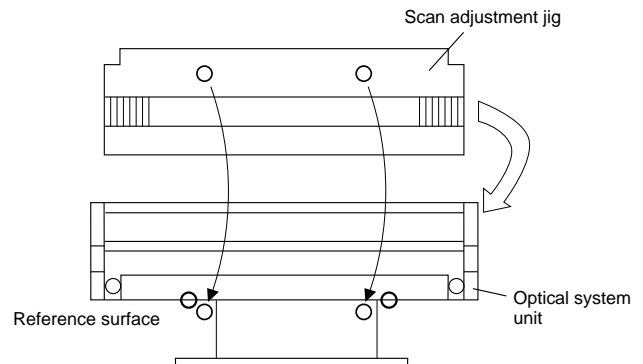
- ① Switch off the machine and disconnect the AC power cable from the wall socket.
- ② Fully open the upper cabinet, remove the fixing screws of the recording paper tray and remove the recording paper tray. In order to perform a focus adjustment, remove the optical system unit from the frame.
- ③ Disconnect the main pwb from the TEL/LIU pwb.
- ④ Connect your oscilloscope channel 1 to the VIN signal and channel 2 of your oscilloscope to ϕ T signal (Refer Pin 4 of connector CNCCD on the main pwb). Connect the earth clips of either probe to AG ground as shown. Set the trigger to channel 2.



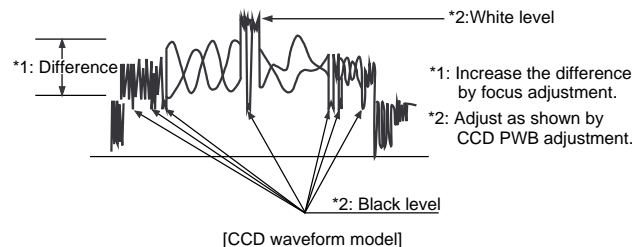
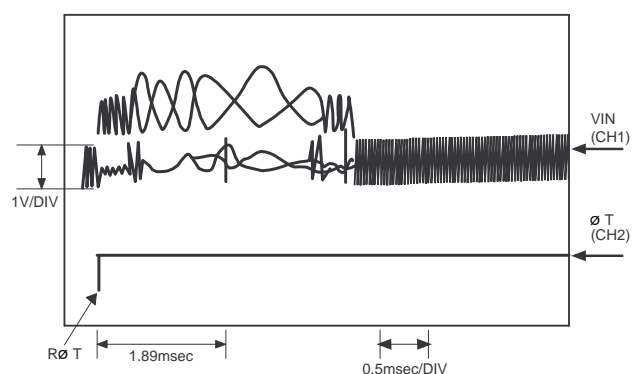
VO CNCCD-3 (CCD source output)
 ϕ T CNCCD-6 (Line sync signal)
VG CNCCD-5 (Ground)

- ⑤ Re-connect the main pwb to the TEL/LIU pwb and connect these circuit boards to the connectors on the chassis.
- ⑥ Re-assemble up to and including the recording paper tray to the main chassis and close upper cabinet.
- ⑦ Plug the AC power cable into the wall outlet and turn the fax machine on.
- ⑧ Insert a test chart in the document hopper and execute the CCD Adjust Mode diagnostic. Press the START key to enable local copy until approximately one fifth of the page has been copied, then press the STOP key to enable the CPU wait state.
- ⑨ Fully open the upper cabinet and remove the recording paper tray.
- ⑩ Install the scan adjustment jig to the optical system unit, so that the pattern surface is on the lower side.
- ⑪ Fit the pins of the scan adjustment jig to the holes of the optical system frame.

- ⑫ Lightly loosen the red screws of the CCD pwb and obtain the VID signal waveform in synchronization with ϕ T signal waveform. Adjust the CCD pwb positioning to obtain the waveform as shown below.



CCD waveform

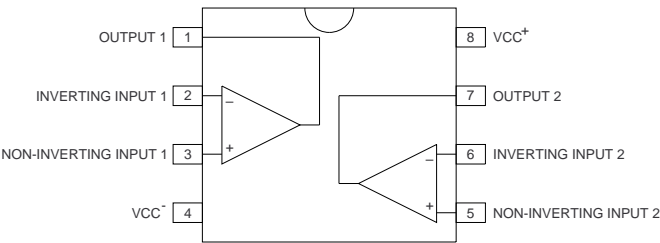


- ⑬ After completing the CCD adjustment, tighten the two red screws on the CCD pwb and apply screw locking material to prevent the CCD pwb from moving.
- ⑭ Assemble the recording paper tray and fixing screws.

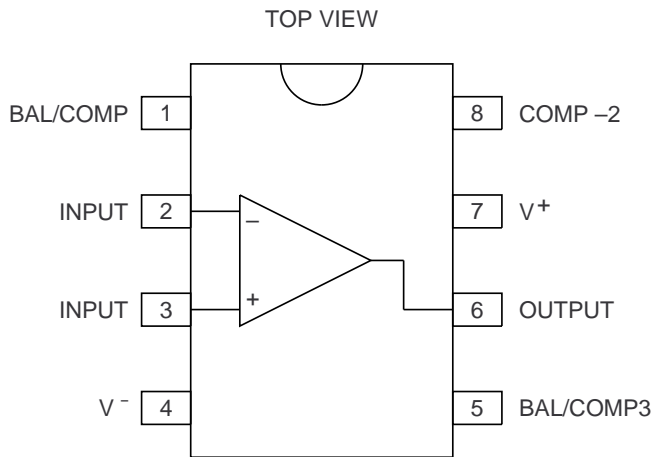
[2] IC signal name

CONTROL PWB UNIT

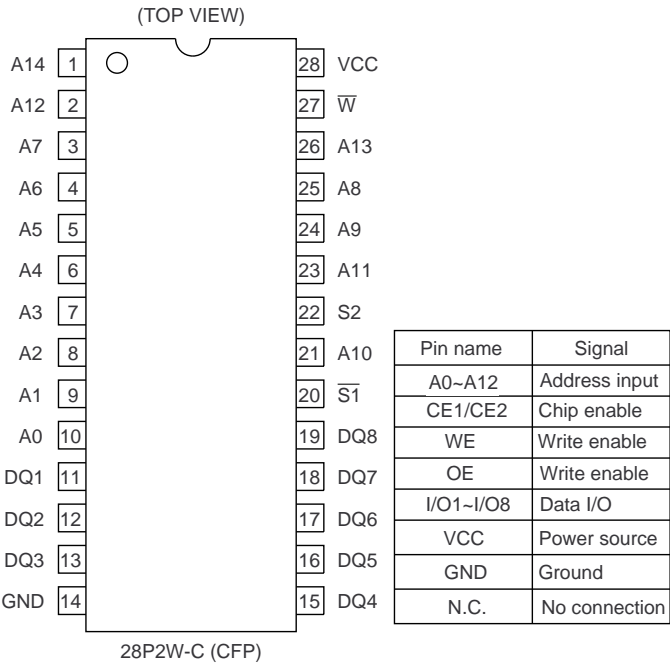
IC104: VHiNJM4558MF-(NJM4558M)



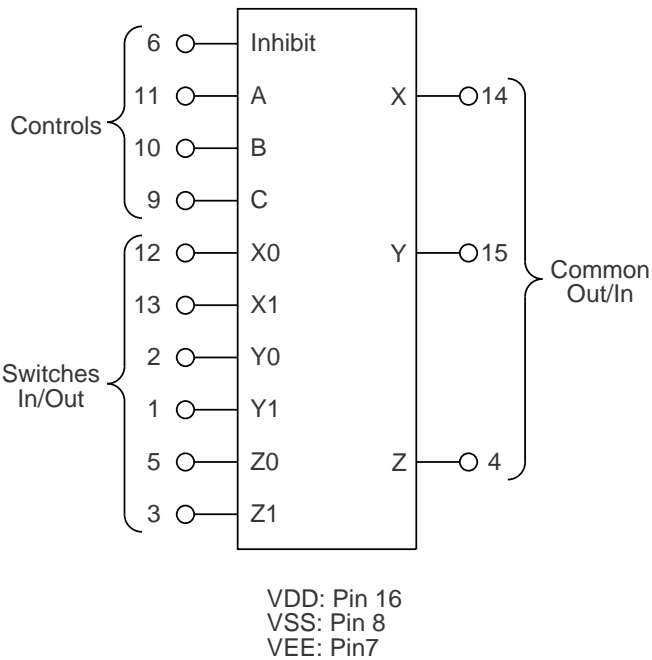
IC6: VHiNJM318M/-F (NJM318M)



IC12: VHiM5255CF70L (M5M5255CFP)

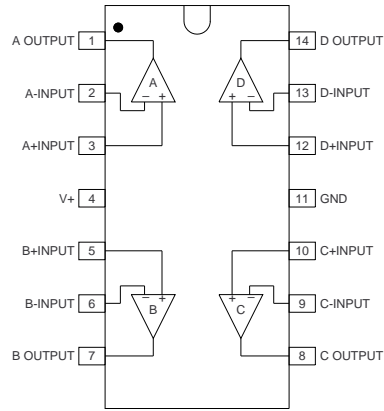


IC5: VHiHEF4053BT1 (HEF4053)

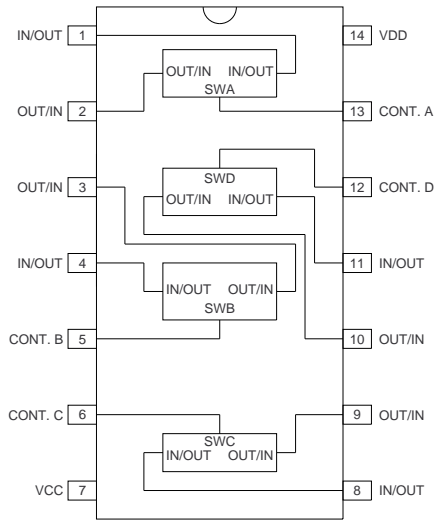


UX-1100DE
FO-1450DE

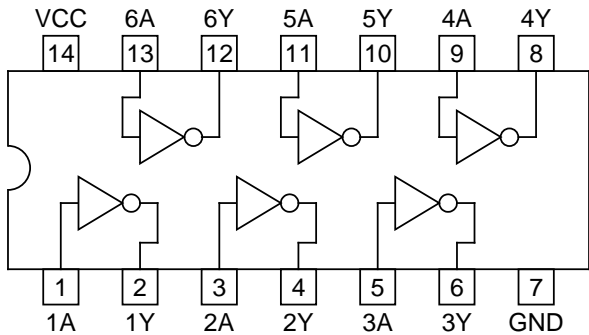
IC105: VHiNJM2902M-1 (NJM2902M)



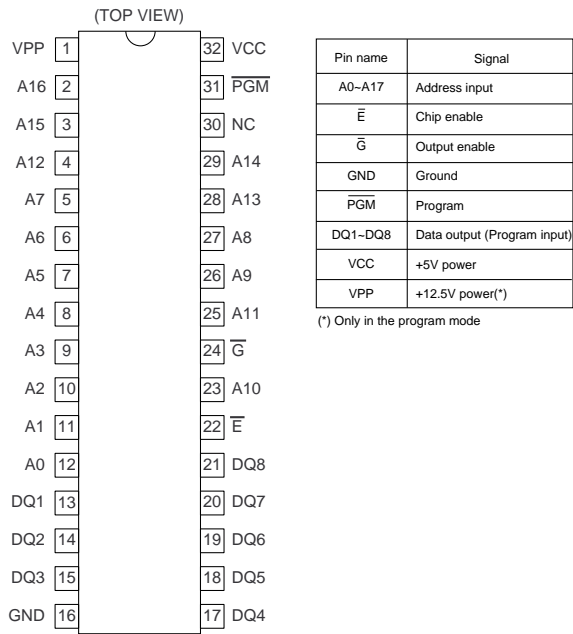
IC7, 8: VHiHEF4066BT1 (HEF4066)



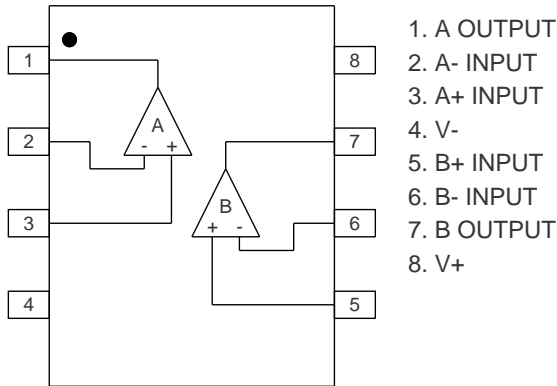
IC101: VHiMC74HCU04F (MC74HCU04F)



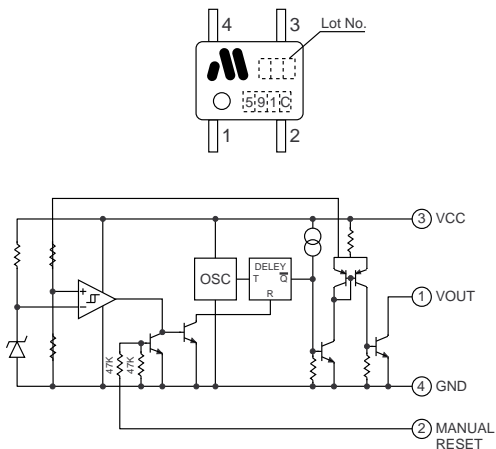
IC2: VHi27C02015TI (27C020)
EP-ROM



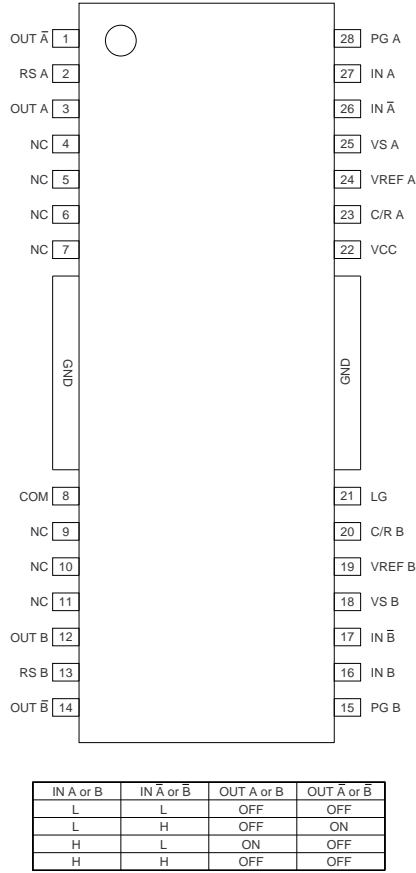
IC100: VHiNJM2903M/-(NJM2903M)



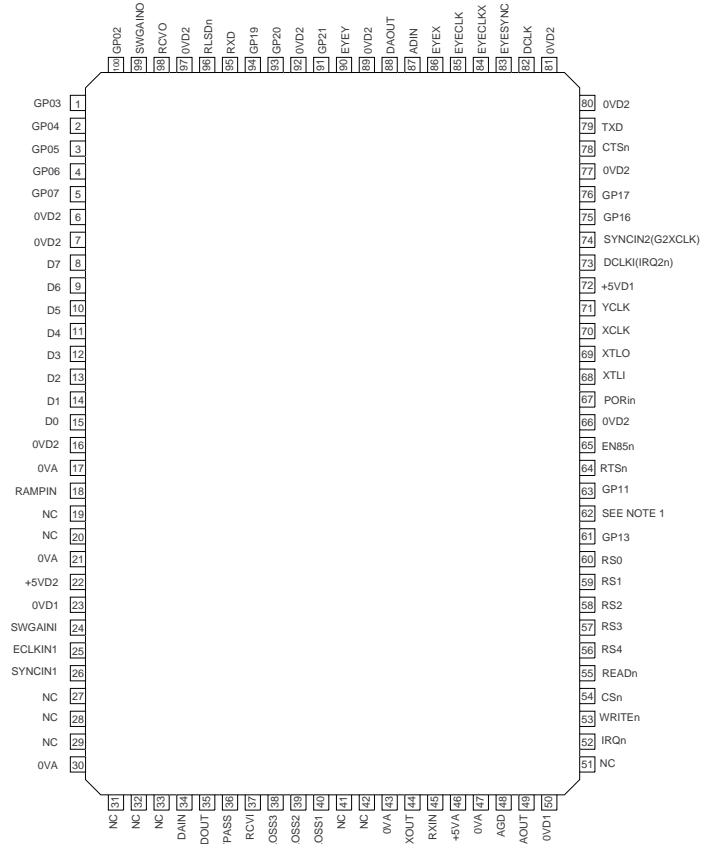
IC102: VHiPST591CMT1 (PST591C)



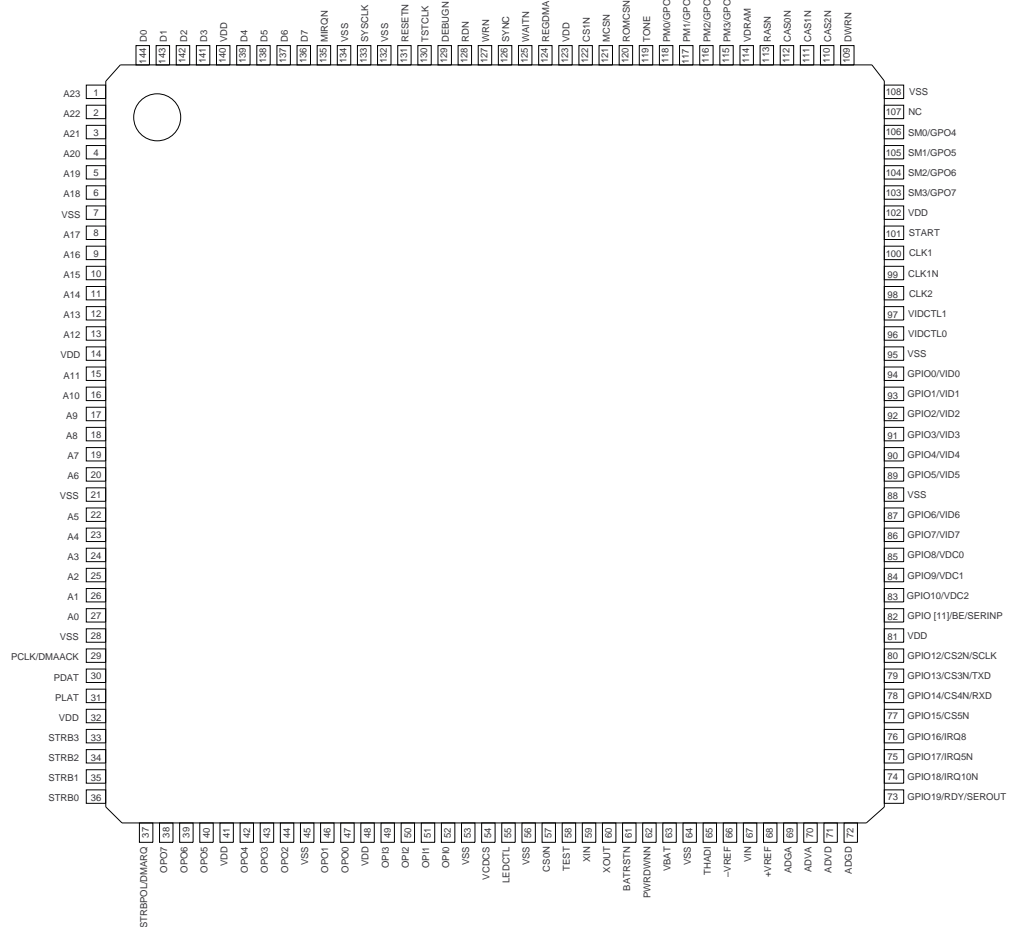
IC11: VHiMTD1120F-1 (MTD1120F)



IC4: VHiR96CiDXMVP (R96DFXL)

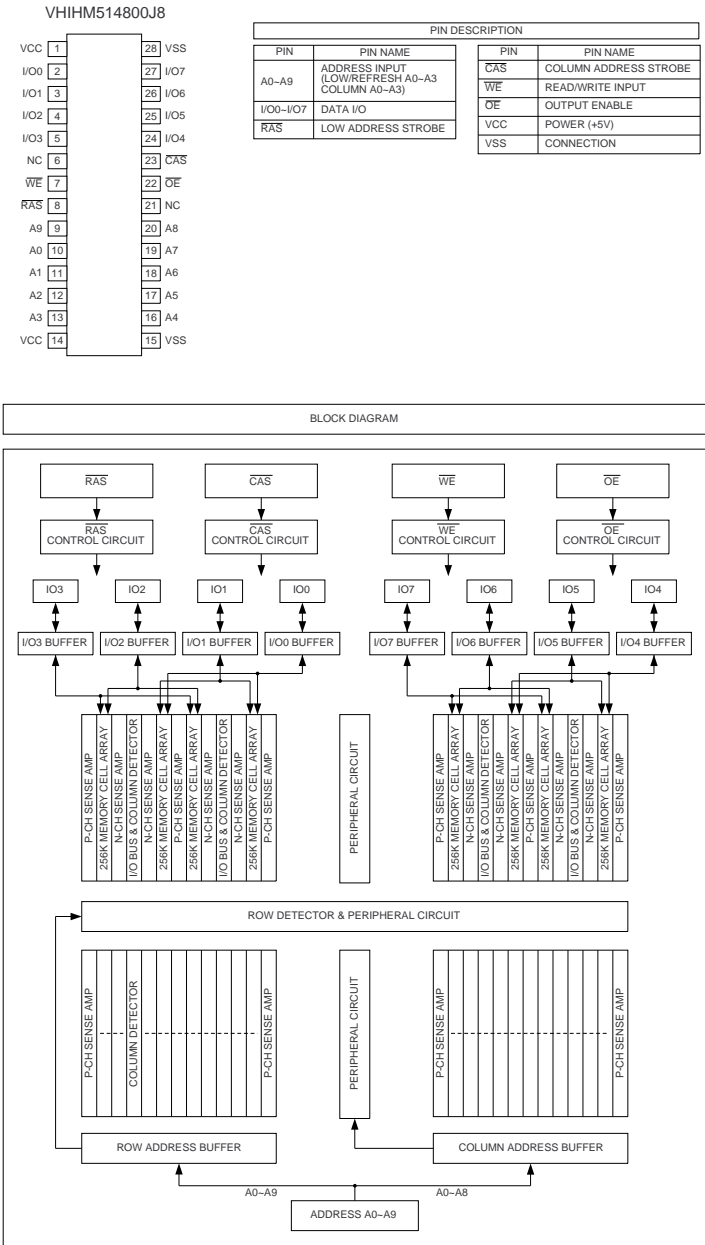


IC3: VHiR96CiDXMVP (XFC-MVP)



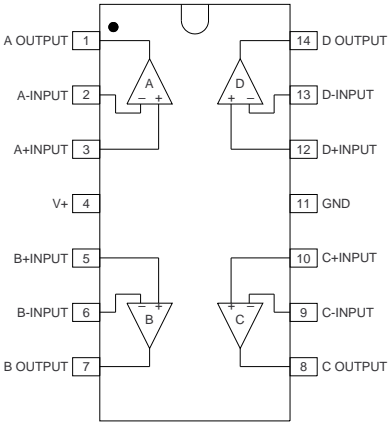
UX-1100DE
FO-1450DE

IC15: VHIHM514800J8 (HM514800J8)

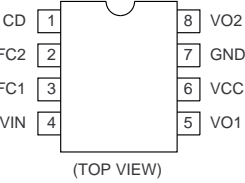


TEL/LIU PWB UNIT

IC2: VHiNJM2902D-1 (NJM2902N)



IC1: VHiNJM2113D-1 (NJM2113D)



SHARP PARTS GUIDE

UX-1100 MODEL FO-1450

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| 4 Optical unit | 12 CCD PWB unit |
| 5 Drive unit | 13 Joint PWB unit |
| 6 Head unit | 50 Hardware parts |
| 7 Paper cassette unit | ■ Index |
| 8 Packing material & Accessories | |

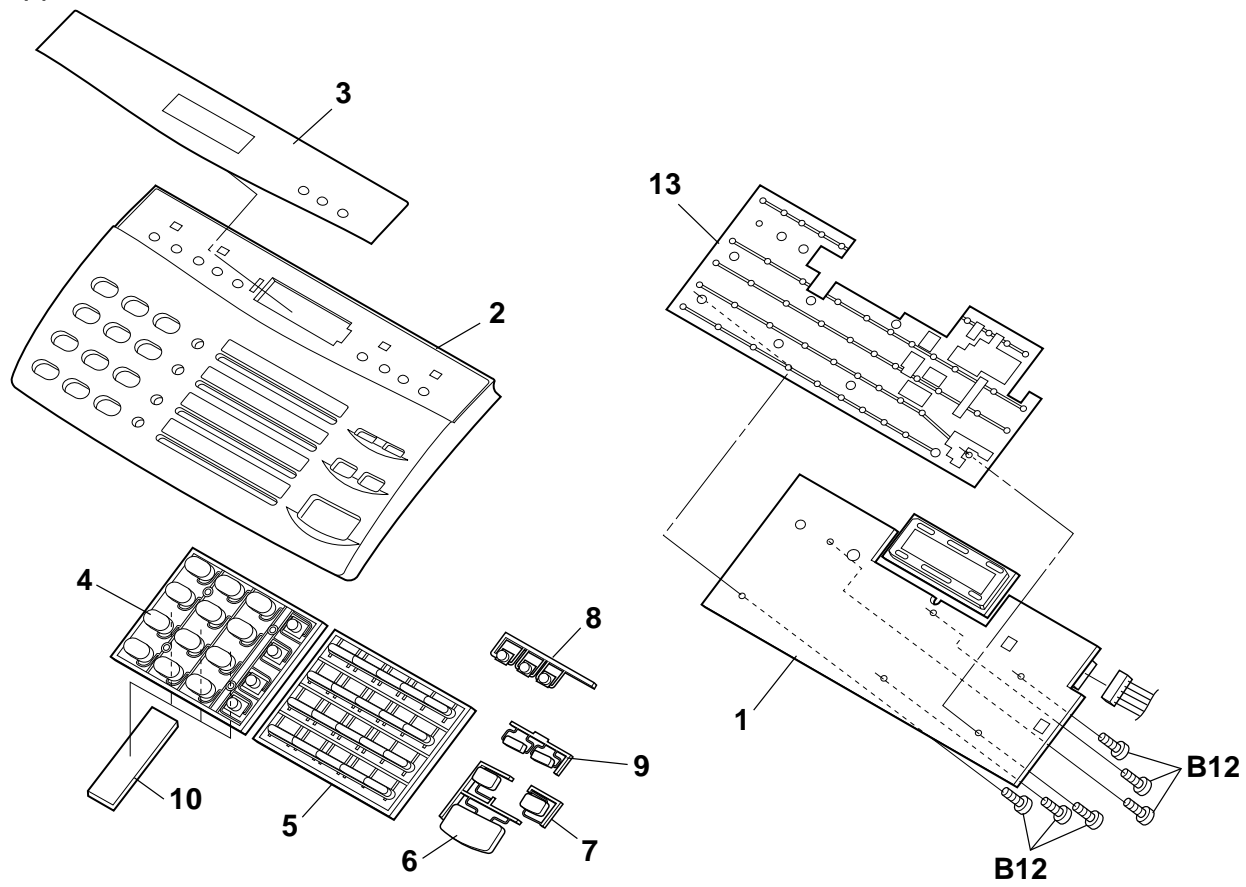
Because parts marked with "△" is indispensable for the machine safety maintenance and operation, it must be replaced with the parts specific to the product specification.



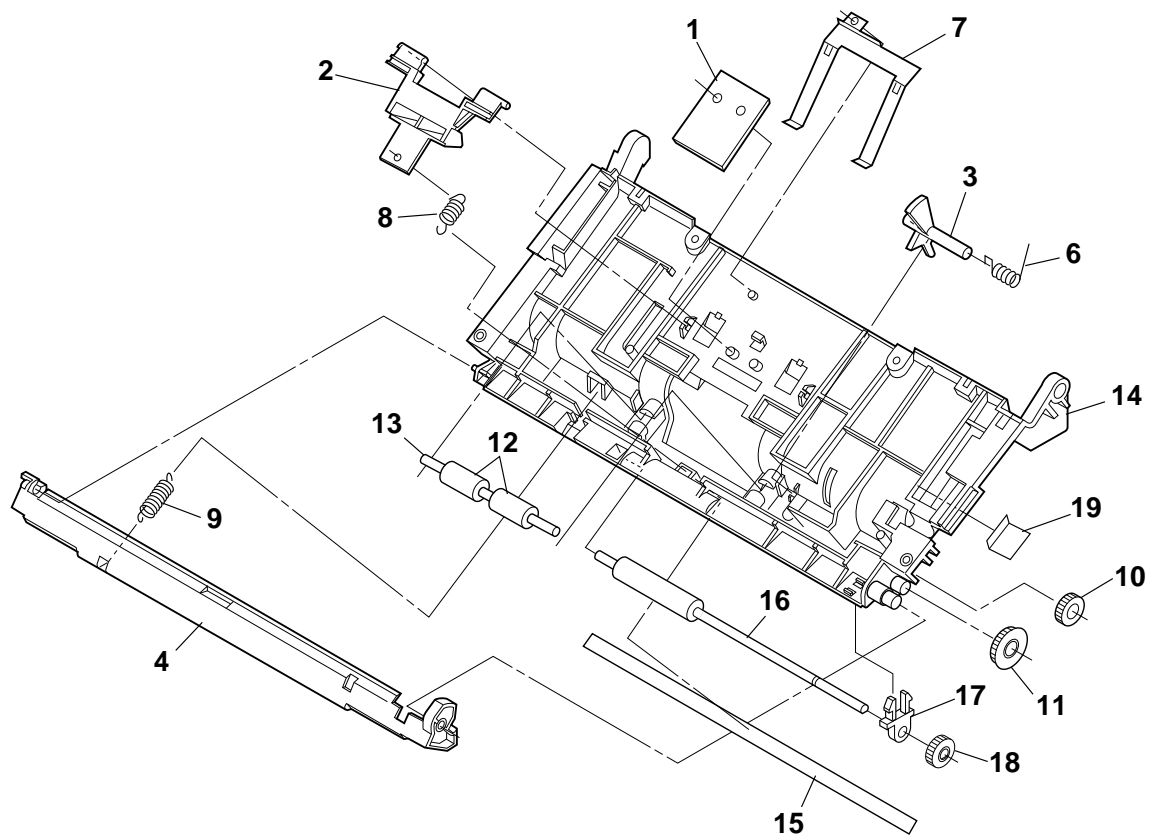
1 Cabinet,, etc.

[illegible]

2 Upper cabinet



3 Document guide upper



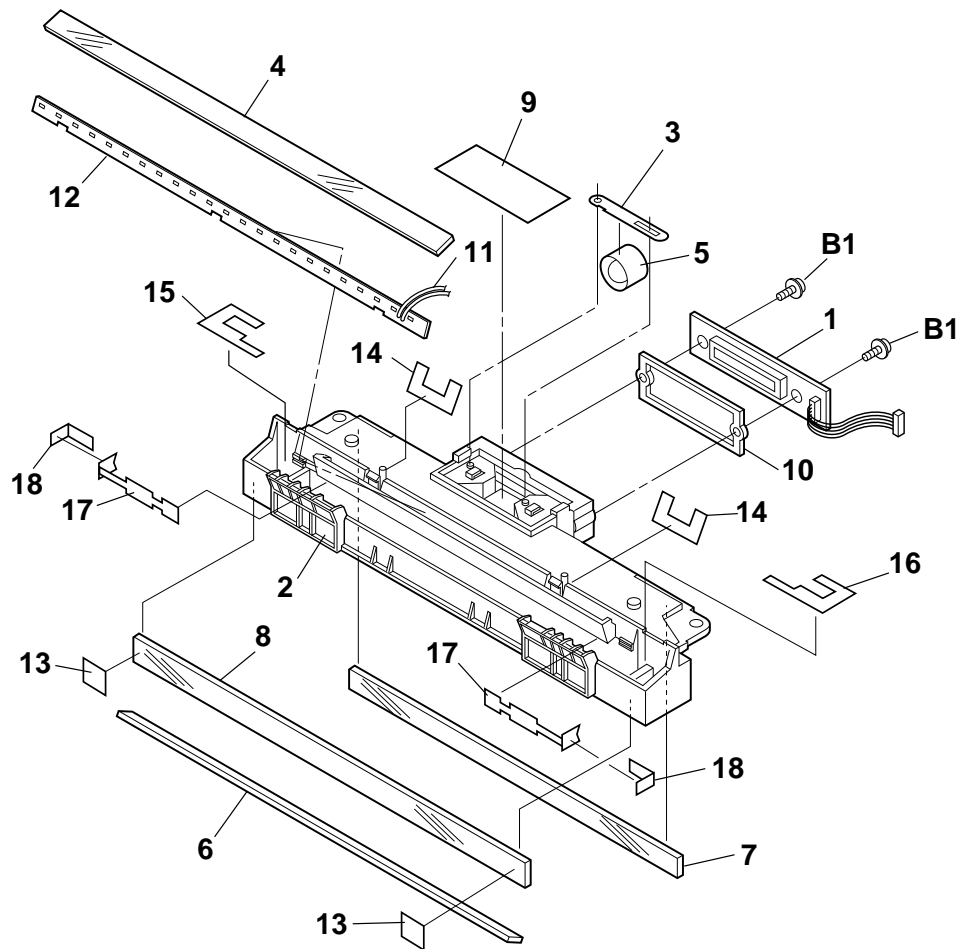
2 Upper cabinet

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
1	DCEKP477AXH01	BN	N	E	Operation panel PWB unit
2	GCABA2269XHSD	AQ	N	D	Upper cabinet [1100DE]
	GCABA2269XHSH	AQ	N	D	Upper cabinet [1450DE]
3	HPNLH2367XHSD	AL	N	D	Decoration panel [1100DE]
	HPNLH2367XHSH	AL	N	D	Decoration panel [1450DE]
4	JBTN-2174XHSA	AK	N	C	12key [1100DE]
	JBTN-2174XHSC	AK	N	C	12key [1450DE]
5	JBTN-2175XHSA	AG	N	C	Direct key [1100DE]
	JBTN-2175XHSC	AG	N	C	Direct key [1450DE]
6	JBTN-2176XHSA	AE	N	C	Start key
7	JBTN-2178XHSA	AD	N	C	Stop key
8	JBTN-2179XHSA	AD	N	C	Mode key
9	JBTN-2180XHSA	AD	N	C	Function key [1100DE]
	JBTN-2180XHSC	AD	N	C	Function key [1450DE]
10	PGUMS2142XHZZ	AC	N	C	12key rubber sheet
13	PSHEZ3195SCZZ	AN	N	C	Key sheet
	(Unit)				
901	CPNLH2367XH07	BQ	N	E	Operation panel unit [1100DE]
	CPNLH2367XH08	BM	N	E	Operation panel unit [1450DE]

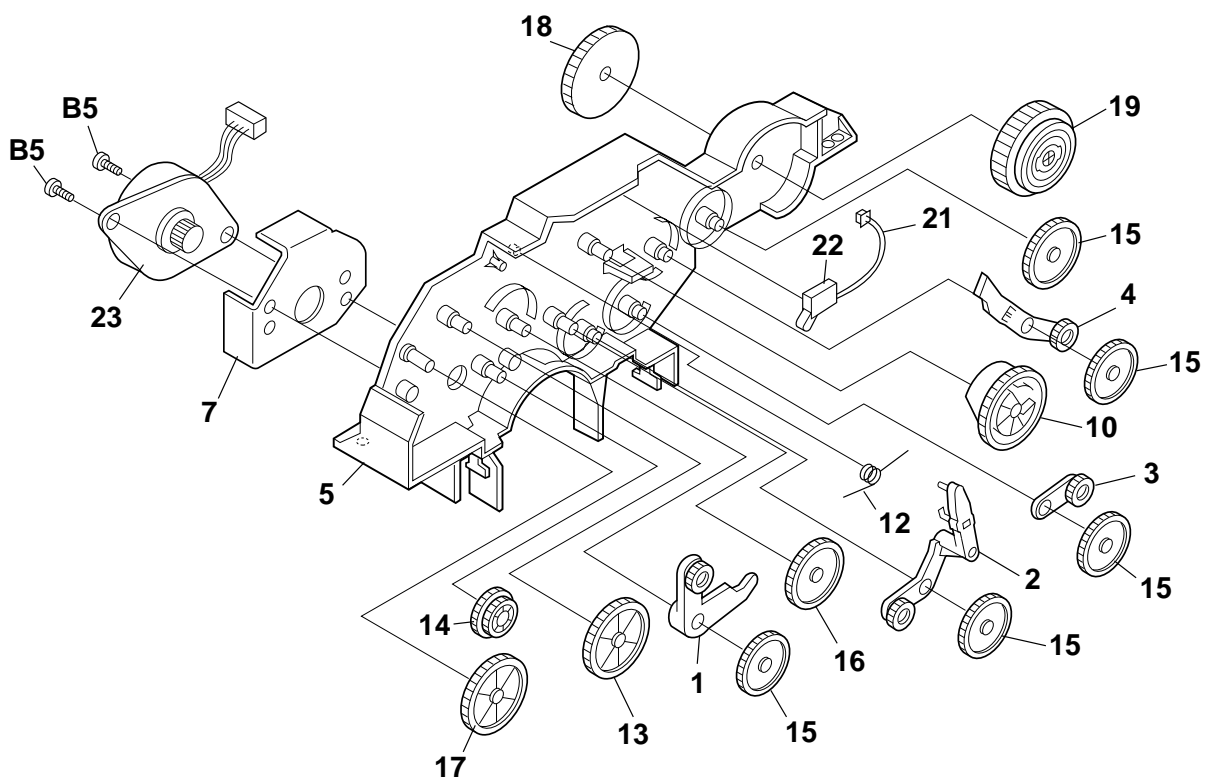
3 Document guide upper

[illegible]

4 Optical unit



5 Drive unit



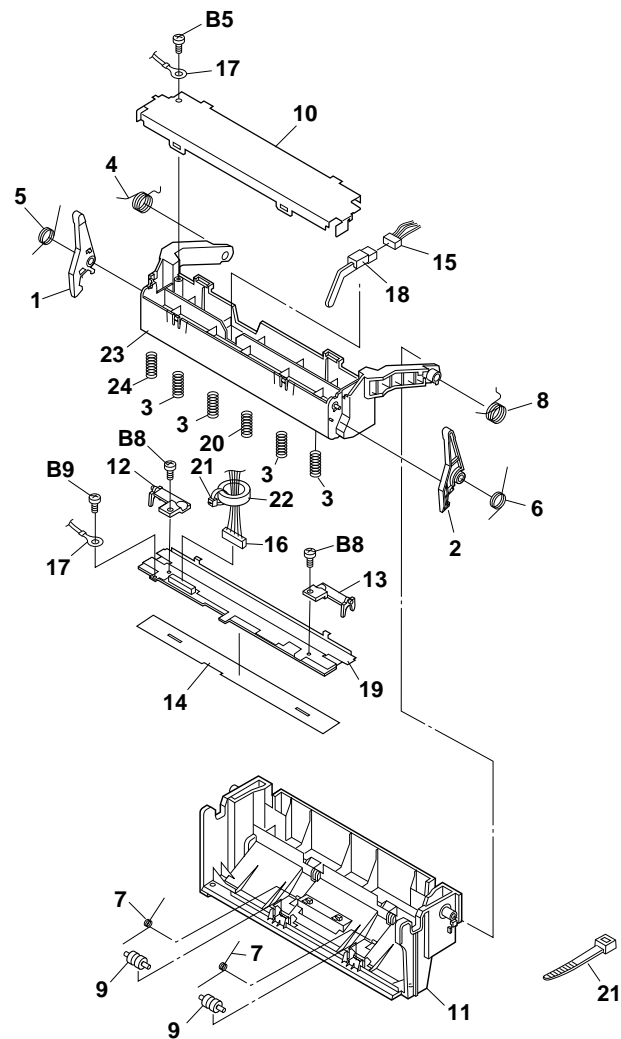
4 Optical unit

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
1	DCEKD475AXH01	BD	N	E	CCD PWB unit
2	LFRM-2164XHZZ	AQ	N	C	Optical frame
3	MSPRP2817XHZZ	AC	N	C	Lens holding spring
4	PGLSP2056XHZZ	AE	N	C	Reader glass
5	PLNS-2049XHZZ	AZ	N	C	Lens
6	PMIR-2070XHZZ	AG	N	C	Mirror 1
7	PMIR-2071XHZZ	AH	N	C	Mirror 2
8	PMIR-2072XHZZ	AH	N	C	Mirror 3
9	PSHEZ3196XHZZ	AC	N	C	Shading sheet
10	PSPAZ2211XHZZ	AE	N	C	CCD spacer
11	QCNW-4544XHZZ	AE	N	C	LED cable
12	VHPSNK15A24-1	AZ	N	B	LED
13	PSHEZ3245XHZZ	AC	N	C	Mirror sheet
14	PSHEZ3242XHZZ	AC	N	C	LED dustproof sheet
15	PSHEZ3240XHZZ	AC	N	C	Dustproof sheet, left
16	PSHEZ3241XHZZ	AC	N	C	Dustproof sheet, right
17	PSHEZ3238XHZZ	AC	N	C	Shield sheet
18	PFLT-2006XHZZ	AA	N	C	Felt

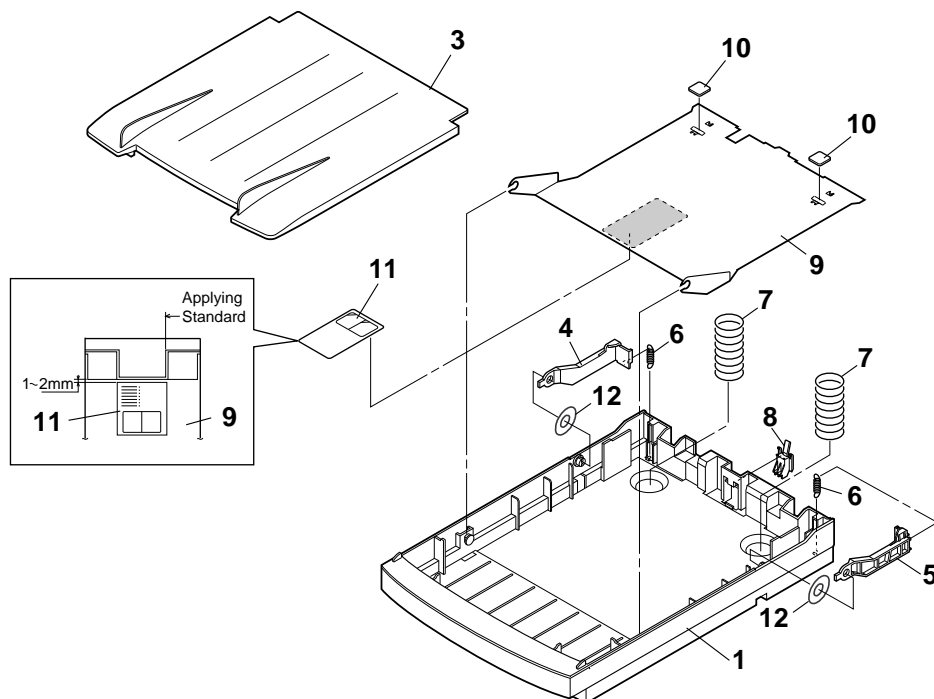
5 Drive unit

[illegible]

6 Head unit



7 Paper cassette unit



6	Head unit
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▲

7 Paper cassette unit

[1100DE]



– 9 –

9 Control PWB unit

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
1	UBATL2033SCZZ	AK		B	Battery(CR2032) [B1]
2	VCEAGA1HW106M	AA		C	Capacitor(50WV 10μF) [C1]
3	VCEAGA1HW475M	AA		C	Capacitor(50WV 4.7μF) [C2]
4	VCEAGA1HW106M	AA		C	Capacitor(50WV 10μF) [C3]
5	VCEAGA1HW226M	AB	N	C	Capacitor(50WV 2.2μF) [C4]
6	VCEAGA1HW106M	AA		C	Capacitor(50WV 10μF) [C5]
7	VCEAGA1HW226M	AB	N	C	Capacitor(50WV 2.2μF) [C6]
8	VCEAGA1HW226M	AB	N	C	Capacitor(50WV 2.2μF) [C7]
9	VCEAGA1HW107M	AA		C	Capacitor(50WV 100μF) [C9]
10	VCEAGA1HW226M	AB	N	C	Capacitor(50WV 2.2μF) [C10]
11	VCEAGA1HW226M	AB	N	C	Capacitor(50WV 2.2μF) [C11]
12	VCEAGA1HW226M	AB	N	C	Capacitor(50WV 2.2μF) [C12]
13	VCKYTV1CF105Z	AB		C	Capacitor(16WV 1.0μF) [C101]
14	VCKYTV1EF104Z	AA		C	Capacitor(25WV 0.10μF) [C103]
15	VCKYTV1HB222K	AA		C	Capacitor(50WV 2200PF) [C108]
16	VCKYTV1HB222K	AA		C	Capacitor(50WV 2200PF) [C109]
17	VCKYTV1EF104Z	AA		C	Capacitor(25WV 0.10μF) [C110]
18	VCKYTV1HB222K	AA		C	Capacitor(50WV 2200PF) [C111]
19	VCKYTV1EF104Z	AA		C	Capacitor(25WV 0.10μF) [C112]
20	VCKYTV1HB102K	AA		C	Capacitor(50WV 1000PF) [C113]
21	VCKYTV1HB102K	AA		C	Capacitor(50WV 1000PF) [C114]
22	VCKYTV1HB102K	AA		C	Capacitor(50WV 1000PF) [C115]
23	VCKYTV1HB332K	AA		C	Capacitor(50WV 3300PF) [C116]
24	VCKYTV1HB102K	AA		C	Capacitor(50WV 1000PF) [C117]
25	VCKYTV1EF104Z	AA		C	Capacitor(25WV 0.10μF) [C118]
26	VCKYTV1HB332K	AA		C	Capacitor(50WV 3300PF) [C119]
27	VCKYTV1HB332K	AA		C	Capacitor(50WV 3300PF) [C120]
28	VCKYTV1HB332K	AA		C	Capacitor(50WV 3300PF) [C121]
29	VCKYTV1EF104Z	AA		C	Capacitor(25WV 0.10μF) [C122]
30	VCKYTV1CF105Z	AB		C	Capacitor(16WV 1.0μF) [C123]
31	VCCCTV1HH150J	AA		C	Capacitor(50WV 15PF) [C124]
32	VCKYTQ1HF104Z	AA		C	Capacitor(50WV 0.1μF) [C125]
33	VCKYTV1HB102K	AA		C	Capacitor(50WV 1000PF) [C126]
34	VCKYTV1EF104Z	AA		C	Capacitor(25WV 0.10μF) [C127]
35	VCCCTV1HH150J	AA		C	Capacitor(50WV 15PF) [C128]
36	VCKYTV1HB102K	AA		C	Capacitor(50WV 1000PF) [C129]
37	VCKYTV1HB102K	AA		C	Capacitor(50WV 1000PF) [C130]
38	VCKYTV1CF105Z	AB		C	Capacitor(16WV 1.0μF) [C131]
39	VCKYTV1CF105Z	AB		C	Capacitor(16WV 1.0μF) [C132]
40	VCKYTV1HB102K	AA		C	Capacitor(50WV 1000PF) [C133]
41	VCKYTV1HB222K	AA		C	Capacitor(50WV 2200PF) [C134]
42	VCCCTV1HH560J	AA		C	Capacitor(50WV 56PF) [C135]
43	VCKYTV1CF105Z	AB		C	Capacitor(16WV 1.0μF) [C136]
44	VCKYTV1HB102K	AA		C	Capacitor(50WV 1000PF) [C137]
45	VCCCTV1HH560J	AA		C	Capacitor(50WV 56PF) [C138]
46	VCKYTV1HB102K	AA		C	Capacitor(50WV 1000PF) [C139]
47	VCKYTV1CF105Z	AB		C	Capacitor(16WV 1.0μF) [C140]
48	VCCCTV1HH560J	AA		C	Capacitor(50WV 56PF) [C141]
49	VCKYTV1HB102K	AA		C	Capacitor(50WV 1000PF) [C142]
50	VCCCTV1HH560J	AA		C	Capacitor(50WV 56PF) [C143]
51	VCKYTV1CF105Z	AB		C	Capacitor(16WV 1.0μF) [C144]
52	VCCCTV1HH101J	AA		C	Capacitor(50WV 100PF) [C145]
53	VCKYTV1CF105Z	AB		C	Capacitor(16WV 1.0μF) [C146]
54	VCKYTV1CF105Z	AB		C	Capacitor(16WV 1.0μF) [C147]
55	VCCCTV1HH101J	AA		C	Capacitor(50WV 100PF) [C148]
56	VCCCTV1HH101J	AA		C	Capacitor(50WV 100PF) [C149]
57	VCCCTV1HH101J	AA		C	Capacitor(50WV 100PF) [C150]
58	VCKYTV1HB102K	AA		C	Capacitor(50WV 1000PF) [C151]
59	VCCCTV1HH101J	AA		C	Capacitor(50WV 100PF) [C152]
60	VCKYTV1EF104Z	AA		C	Capacitor(25WV 0.10μF) [C153]
61	VCKYTV1CF105Z	AB		C	Capacitor(16WV 1.0μF) [C154]
62	VCCCTV1HH101J	AA		C	Capacitor(50WV 100PF) [C155]
63	VCCCTV1HH101J	AA		C	Capacitor(50WV 100PF) [C156]
64	VCKYTV1CF105Z	AB		C	Capacitor(16WV 1.0μF) [C157]
65	VCKYTV1EF104Z	AA		C	Capacitor(25WV 0.10μF) [C158]
66	VCCCTV1HH560J	AA		C	Capacitor(50WV 56PF) [C159]
67	VCCCTV1HH101J	AA		C	Capacitor(50WV 100PF) [C161]
68	VCCCTV1HH560J	AA		C	Capacitor(50WV 56PF) [C162]
69	VCKYTV1HB102K	AA		C	Capacitor(50WV 1000PF) [C163]
70	VCKYTV1CF105Z	AB		C	Capacitor(16WV 1.0μF) [C164]
71	VCCCTV1HH560J	AA		C	Capacitor(50WV 56PF) [C165]
72	VCCCTV1HH560J	AA		C	Capacitor(50WV 56PF) [C166]
73	VCCCTV1HH560J	AA		C	Capacitor(50WV 56PF) [C167]
74	VCCCTV1HH560J	AA		C	Capacitor(50WV 56PF) [C168]
75	VCKYTV1EF104Z	AA		C	Capacitor(25WV 0.10μF) [C169]
76	VCCCTV1HH510J	AA		C	Capacitor(50WV 51PF) [C170]
77	VCKYTV1CF105Z	AB		C	Capacitor(16WV 1.0μF) [C171]
78	VCCCTV1HH101J	AA		C	Capacitor(50WV 100PF) [C172]
79	VCCCTV1HH270J	AC		C	Capacitor(50WV 27PF) [C173]
80	VCKYTV1HB103K	AB		C	Capacitor(50WV 0.01μF) [C174]

9 Control PWB unit

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
81	VCCCTV1HH270J	AC		C	Capacitor(50WV 27PF) [C175]
82	VCCCTV1HH300J	AA		C	Capacitor(50WV 30PF) [C176]
83	VCCCTV1HH300J	AA		C	Capacitor(50WV 30PF) [C177]
84	VCKYTV1HB222K	AA		C	Capacitor(50WV 2200PF) [C178]
85	VCKYTV1CF105Z	AB		C	Capacitor(16WV 1.0μF) [C179]
86	VCKYTV1HB222K	AA		C	Capacitor(50WV 2200PF) [C180]
87	VCKYTV1EF104Z	AA		C	Capacitor(25WV 0.10μF) [C181]
88	VCKYTV1CF105Z	AB		C	Capacitor(16WV 1.0μF) [C183]
89	VCKYTV1HB222K	AA		C	Capacitor(50WV 2200PF) [C185]
90	VCKYTV1CF105Z	AB		C	Capacitor(16WV 1.0μF) [C186]
91	VCKYTV1CF105Z	AB		C	Capacitor(16WV 1.0μF) [C188]
92	VCKYTV1CF105Z	AB		C	Capacitor(16WV 1.0μF) [C189]
93	VCCSTV1HL391J	AA		C	Capacitor(50WV 390PF) [C191]
94	VCKYTV1EB104K	AA		C	Capacitor(25WV 0.10μF) [C192]
95	VCKYTV1CF105Z	AB		C	Capacitor(16WV 1.0μF) [C193]
96	VCCSTV1HL102J	AA		C	Capacitor(50WV 1000PF) [C194]
97	VCKYTV1HB681K	AA		C	Capacitor(50WV 680PF) [C195]
98	VCKYTV1HB102K	AA		C	Capacitor(50WV 1000PF) [C196]
99	VCKYTV1CF105Z	AB		C	Capacitor(16WV 1.0μF) [C197]
100	VCKYTV1EB104K	AA		C	Capacitor(25WV 0.10μF) [C198]
101	VCKYTV1EF104Z	AA		C	Capacitor(25WV 0.10μF) [C199]
102	VCKYTV1CF105Z	AB		C	Capacitor(16WV 1.0μF) [C202]
103	VRS-TS2AD000J	AA		C	Resistor(1/10W 0Ω ±5%) [C203]
104	VCKYTV1EF104Z	AA		C	Capacitor(25WV 0.10μF) [C204]
105	VRS-TS2AD000J	AA		C	Resistor(1/10W 0Ω ±5%) [C206]
106	VCKYTQ1HF104Z	AA		C	Capacitor(50WV 0.1μF) [C210]
107	VCKYTV1EF104Z	AA		C	Capacitor(25WV 0.10μF) [C211]
108	VCKYTV1EF104Z	AA		C	Capacitor(25WV 0.10μF) [C213]
109	VCKYTV1HB222K	AA		C	Capacitor(50WV 2200PF) [C216]
110	VCCCTV1HH150J	AA		C	Capacitor(50WV 15PF) [C217]
111	VCKYTV1CF105Z	AB		C	Capacitor(16WV 1.0μF) [C220]
112	VCCCTV1HH101J	AA		C	Capacitor(50WV 100PF) [C221]
113	VCKYTV1EF104Z	AA		C	Capacitor(25WV 0.10μF) [C222]
114	VCKYTQ1HF104Z	AA		C	Capacitor(50WV 0.1μF) [C223]
115	VCCCTV1HH560J	AA		C	Capacitor(50WV 56PF) [C224]
116	VCKYTV1HB102K	AA		C	Capacitor(50WV 1000PF) [C226]
117	VCKYTV1HB102K	AA		C	Capacitor(50WV 1000PF) [C227]
118	VCKYTQ1HB102K	AA		C	Capacitor(50WV 1000PF) [C229]
119	VCKYTQ1HB102K	AA		C	Capacitor(50WV 1000PF) [C230]
120	VCKYTV1HB102K	AA		C	Capacitor(50WV 1000PF) [C231]
121	VCKYTQ1HB102K	AA		C	Capacitor(50WV 1000PF) [C232]
122	VCKYTQ1HB102K	AA		C	Capacitor(50WV 1000PF) [C233]
123	VCKYTQ1HB102K	AA		C	Capacitor(50WV 1000PF) [C234]
124	QCNCM7014SC0I	AB		C	Connector(9pin) [CNCCD]
125	QCNCM2442SC0B	AB		C	Connector(21pin) [CNCVR]
126	QCNCM2499SC0H	AE	N	C	Connector(8pin) [CNLIUA]
127	QCNCM2499SC1B	AF	N	C	Connector(12pin) [CNLIUB]
128	QCNCM7014SC0H	AB		C	Connector(8pin) [CNMT]
129	QCNCW2523SC4J	AQ	N	C	Connector(40pin) [CNOPT] [1450DE]
130	QCNCM7014SC1F	AD	N	C	Connector(16pin) [CNPN]
131	QCNCW2500SC0H	AF		C	Connector(8pin) [CNPW]
132	QCNCM7014SC0B	AD		C	Connector(2pin) [CNRBN]
133	QCNCM7014SC1D	AC	N	C	Connector(14pin) [CNTH]
134	VHDDAP202U/-1	AB		B	Diode(DAP202U) [D100]
135	VHD1SS355/-1	AB		B	Diode(1SS355) [D101]
136	VHD1SS355/-1	AB		B	Diode(1SS355) [D102]
137	VHD1SS355/-1	AB		B	Diode(1SS355) [D104]
138	VHD1SS355/-1	AB		B	Diode(1SS355) [D105]
139	VHD1SS355/-1	AB		B	Diode(1SS355) [D106]
140	VHVICPS07/-1	AA		B	Varistor(ICP-S07) [F100]
141	QSOCZ2053XH32	AK		C	IC socket(32pin) [IC2]
	VHI27020FGC0F	BC		B	IC(27020FGC0F)(GREEN) [IC2]
144	VHIR96CIDXMVP	BH	N	B	IC(XFC-MVP) [IC3]
145	VHIR96CIDXMVP	BH	N	B	IC(R96DFXL) [IC4]
146	VHINJM318M/-F	AF		B	IC(NJM318M) [IC6]
147	VHIHEF4066BT1	AF	N	B	IC(HEF4066) [IC8]
148	VHIMTD1120F-1	AQ	N	B	IC(MTD1120F) [IC11]
149	VHIM5255CF70L	AW		B	IC(M5M5255CFP) [IC12]
150	VHIHM514800J8	BG		B	IC(HM514800J8) [IC15]
151	VHINJM2903M/-	AD		B	IC(MJM2903M) [IC100]
152	VHIMC74HCU04F	AD		B	IC(MC74HCU04F) [IC101]
153	VHIPST591CMT1	AE		B	IC(PST591C) [IC102]
154	VHINJM4558MF-	AC		B	IC(NJM4558M) [IC104]
155	VHINJM2902M-1	AF	N	B	IC(NJM2902M) [IC105]
156	RCILZ2131SCZZ	AC	N	C	Coil(Z2131) [L101]
157	RCILZ2131SCZZ	AC	N	C	Coil(Z2131) [L108]
158	VRS-TP2BD000J	AA		C	Resistor(1/8W 0Ω ±5%) [L109]
159	VRS-TP2BD000J	AA		C	Resistor(1/8W 0Ω ±5%) [L110]
160	RCILZ2131SCZZ	AC	N	C	Coil(Z2131) [L111]
161	VRS-TS2AD101J	AA		C	Resistor(1/10W 100Ω ±5%) [L112]

9 Control PWB unit

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
162	RCORF2098SCZZ	AE		C	Coil [L113]
163	VRS-TP2BD000J	AA		C	Resistor(1/8W 0Ω ±5%) [L114]
164	RCILZ2132SCZZ	AD	N	C	Coil(Z2132) [L115]
165	VRS-TS2AD000J	AA		C	Resistor(1/10W 0Ω ±5%) [L116]
166	RCILZ2133SCZZ	AC	N	C	Coil(Z2133) [L117]
167	VRS-TP2BD000J	AA		C	Resistor(1/8W 0Ω ±5%) [L118]
168	VRD-HT2EY100J	AA		C	Resistor(1/4W 10Ω ±5%) [LC1]
169	VHPRPI-574///	AF		B	Photo transistor(RPI-574) [PC2]
170	VRS-RE2HA1R0J	AC	N	C	Resistor(1/2W 1.0Ω ±5%) [R2]
171	VRS-RE2HA1R0J	AC	N	C	Resistor(1/2W 1.0Ω ±5%) [R3]
172	VRS-TS2AD331J	AA		C	Resistor(1/10W 330Ω ±5%) [R100]
173	VRS-TS2AD331J	AA		C	Resistor(1/10W 330Ω ±5%) [R101]
174	VRS-TS2AD331J	AA		C	Resistor(1/10W 330Ω ±5%) [R102]
175	VRS-TS2AD331J	AA		C	Resistor(1/10W 330Ω ±5%) [R103]
176	VRS-TS2AD331J	AA		C	Resistor(1/10W 330Ω ±5%) [R104]
177	VRS-TS2AD101J	AA		C	Resistor(1/10W 100Ω ±5%) [R105]
178	VRS-TS2AD331J	AA		C	Resistor(1/10W 330Ω ±5%) [R106]
179	VRS-TS2AD331J	AA		C	Resistor(1/10W 330Ω ±5%) [R107]
180	VRS-TS2AD331J	AA		C	Resistor(1/10W 330Ω ±5%) [R109]
181	VRS-TS2AD331J	AA		C	Resistor(1/10W 330Ω ±5%) [R110]
182	VRS-TS2AD331J	AA		C	Resistor(1/10W 330Ω ±5%) [R111]
183	VRS-TS2AD101J	AA		C	Resistor(1/10W 100Ω ±5%) [R112]
184	VRS-TS2AD331J	AA		C	Resistor(1/10W 330Ω ±5%) [R113]
185	VRS-TS2AD331J	AA		C	Resistor(1/10W 330Ω ±5%) [R114]
186	VRS-TS2AD331J	AA		C	Resistor(1/10W 330Ω ±5%) [R115]
187	VRS-TS2AD331J	AA		C	Resistor(1/10W 330Ω ±5%) [R116]
188	VRS-TS2AD331J	AA		C	Resistor(1/10W 330Ω ±5%) [R117]
189	VRS-TS2AD331J	AA		C	Resistor(1/10W 330Ω ±5%) [R118]
190	VRS-TS2AD331J	AA		C	Resistor(1/10W 330Ω ±5%) [R119]
191	VRS-TS2AD271J	AA		C	Resistor(1/10W 270Ω ±5%) [R120]
192	VRS-TS2AD221J	AA		C	Resistor(1/10W 220Ω ±5%) [R122]
193	VRS-TS2AD331J	AA		C	Resistor(1/10W 330Ω ±5%) [R123]
194	VRS-TS2AD221J	AA		C	Resistor(1/10W 220Ω ±5%) [R124]
195	VRS-TS2AD221J	AA		C	Resistor(1/10W 220Ω ±5%) [R125]
196	VRS-TS2AD271J	AA		C	Resistor(1/10W 270Ω ±5%) [R126]
197	VRS-TS2AD221J	AA		C	Resistor(1/10W 220Ω ±5%) [R127]
198	VRS-TS2AD221J	AA		C	Resistor(1/10W 220Ω ±5%) [R128]
199	VRS-TS2AD221J	AA		C	Resistor(1/10W 220Ω ±5%) [R129]
200	VRS-TS2AD221J	AA		C	Resistor(1/10W 220Ω ±5%) [R130]
201	VRS-TS2AD101J	AA		C	Resistor(1/10W 100Ω ±5%) [R131]
202	VRS-TS2AD221J	AA		C	Resistor(1/10W 220Ω ±5%) [R132]
203	VRS-TS2AD101J	AA		C	Resistor(1/10W 100Ω ±5%) [R133]
204	VRS-TS2AD101J	AA		C	Resistor(1/10W 100Ω ±5%) [R134]
205	VRS-TS2AD101J	AA		C	Resistor(1/10W 100Ω ±5%) [R135]
206	VRS-TS2AD101J	AA		C	Resistor(1/10W 100Ω ±5%) [R136]
207	VRS-TS2AD271J	AA		C	Resistor(1/10W 270Ω ±5%) [R137]
208	VRS-TS2AD271J	AA		C	Resistor(1/10W 270Ω ±5%) [R138]
209	VRS-TS2AD101J	AA		C	Resistor(1/10W 100Ω ±5%) [R139]
210	VRS-TS2AD562J	AA		C	Resistor(1/10W 5.6KΩ ±5%) [R140]
211	VRS-TS2AD303J	AA		C	Resistor(1/10W 30KΩ ±5%) [R141]
212	VRS-TS2AD332J	AA		C	Resistor(1/10W 3.3KΩ ±5%) [R142]
213	VRS-TS2AD472J	AA		C	Resistor(1/10W 4.7KΩ ±5%) [R143]
214	VRS-TS2AD271J	AA		C	Resistor(1/10W 270Ω ±5%) [R144]
215	VRS-TS2AD182J	AA		C	Resistor(1/10W 1.8KΩ ±5%) [R145]
216	VRS-TS2AD182J	AA		C	Resistor(1/10W 1.8KΩ ±5%) [R146]
217	VRS-TS2AD203J	AA		C	Resistor(1/10W 20KΩ ±5%) [R147]
218	VRS-TS2AD472J	AA		C	Resistor(1/10W 4.7KΩ ±5%) [R148]
219	VRS-TS2AD472J	AA		C	Resistor(1/10W 4.7KΩ ±5%) [R149]
220	VRS-TS2AD474J	AA		C	Resistor(1/10W 470KΩ ±5%) [R150]
221	VRS-TS2AD472J	AA		C	Resistor(1/10W 4.7KΩ ±5%) [R151]
222	VRS-TS2AD203J	AA		C	Resistor(1/10W 20KΩ ±5%) [R152]
223	VRS-TS2AD472J	AA		C	Resistor(1/10W 4.7KΩ ±5%) [R153]
224	VRS-TS2AD151J	AA		C	Resistor(1/10W 150Ω ±5%) [R154]
225	VRS-TS2AD472J	AA		C	Resistor(1/10W 4.7KΩ ±5%) [R155]
226	VRS-TS2AD101J	AA		C	Resistor(1/10W 100Ω ±5%) [R156]
227	VRS-TS2AD101J	AA		C	Resistor(1/10W 100Ω ±5%) [R157]
228	VRS-TS2AD472J	AA		C	Resistor(1/10W 4.7KΩ ±5%) [R158]
229	VRS-TS2AD472J	AA		C	Resistor(1/10W 4.7KΩ ±5%) [R159]
230	VRS-TS2AD151J	AA		C	Resistor(1/10W 150Ω ±5%) [R160]
231	VRS-TS2AD562J	AA		C	Resistor(1/10W 5.6KΩ ±5%) [R161]
232	VRS-TS2AD151J	AA		C	Resistor(1/10W 150Ω ±5%) [R162]
233	VRS-TS2AD106J	AA		C	Resistor(1/10W 10MΩ ±5%) [R163]
234	VRS-TS2AD104J	AA		C	Resistor(1/10W 100KΩ ±5%) [R164]
235	VRS-TS2AD000J	AA		C	Resistor(1/10W 0Ω ±5%) [R165]
236	VRS-TS2AD103J	AA		C	Resistor(1/10W 10KΩ ±5%) [R166]
237	VRS-TS2AD103J	AA		C	Resistor(1/10W 10KΩ ±5%) [R167]
238	VRS-TS2AD103J	AA		C	Resistor(1/10W 10KΩ ±5%) [R168]
239	VRS-TS2AD103J	AA		C	Resistor(1/10W 10KΩ ±5%) [R169]
240	VRS-TS2AD103J	AA		C	Resistor(1/10W 10KΩ ±5%) [R170]
241	VRS-TS2AD101J	AA		C	Resistor(1/10W 100Ω ±5%) [R171]

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NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
242	VRS-TS2AD103J	AA		C	Resistor(1/10W 10KΩ ±5%) [R172]
243	VRS-TS2AD103J	AA		C	Resistor(1/10W 10KΩ ±5%) [R173] [1450DE]
244	VRS-TS2AD101J	AA		C	Resistor(1/10W 100Ω ±5%) [R174]
245	VRS-TS2AD101J	AA		C	Resistor(1/10W 100Ω ±5%) [R175]
246	VRS-TS2AD103J	AA		C	Resistor(1/10W 10KΩ ±5%) [R176]
247	VRS-TS2AD101J	AA		C	Resistor(1/10W 100Ω ±5%) [R177]
248	VRS-TS2AD103J	AA		C	Resistor(1/10W 10KΩ ±5%) [R178]
249	VRS-TS2AD103J	AA		C	Resistor(1/10W 10KΩ ±5%) [R179]
250	VRS-TS2AD101J	AA		C	Resistor(1/10W 100Ω ±5%) [R180]
251	VRS-TS2AD333J	AA		C	Resistor(1/10W 33KΩ ±5%) [R181]
252	VRS-TS2AD153J	AA		C	Resistor(1/10W 15KΩ ±1%) [R182]
253	VRS-TS2AD103J	AA		C	Resistor(1/10W 10KΩ ±5%) [R183]
254	VRS-TS2AD271J	AA		C	Resistor(1/10W 270Ω ±5%) [R184]
255	VRS-TS2AD101J	AA		C	Resistor(1/10W 100Ω ±5%) [R185]
256	VRS-TS2AD103J	AA		C	Resistor(1/10W 10KΩ ±5%) [R186]
257	VRS-TS2AD100J	AA		C	Resistor(1/10W 10.0Ω ±5%) [R187]
258	VRS-TS2AD333J	AA		C	Resistor(1/10W 33KΩ ±5%) [R188]
259	VRS-TS2AD103J	AA		C	Resistor(1/10W 10KΩ ±5%) [R189]
260	VRS-TS2AD103J	AA		C	Resistor(1/10W 10KΩ ±5%) [R190]
261	VRS-TS2AD303J	AA		C	Resistor(1/10W 30KΩ ±5%) [R191]
262	VRS-TS2AD103J	AA		C	Resistor(1/10W 10KΩ ±5%) [R192]
263	VRS-TS2AD273J	AA		C	Resistor(1/10W 27KΩ ±5%) [R194]
264	VRS-TS2AD103J	AA		C	Resistor(1/10W 10KΩ ±5%) [R195]
265	VRS-TS2AD471J	AA		C	Resistor(1/10W 470Ω ±5%) [R196]
266	VRS-TS2AD103J	AA		C	Resistor(1/10W 10KΩ ±5%) [R197]
267	VRS-TS2AD103J	AA		C	Resistor(1/10W 10KΩ ±5%) [R198]
268	VRS-TS2AD331J	AA		C	Resistor(1/10W 330Ω ±5%) [R199]
269	VRS-TS2AD103J	AA		C	Resistor(1/10W 10KΩ ±5%) [R200]
270	VRS-TS2AD271J	AA		C	Resistor(1/10W 270Ω ±5%) [R201]
271	VRS-TS2AD000J	AA		C	Resistor(1/10W 0Ω ±5%) [R202]
272	VRS-TS2AD331J	AA		C	Resistor(1/10W 330Ω ±5%) [R203]
273	VRS-TS2AD201J	AG		C	Resistor(1/10W 200Ω ±5%) [R204]
274	VRS-TS2AD121J	AA		C	Resistor(1/10W 120Ω ±5%) [R205]
275	VRS-TS2AD103J	AA		C	Resistor(1/10W 10KΩ ±5%) [R206]
276	VRS-TS2AD151J	AA		C	Resistor(1/10W 150Ω ±5%) [R207]
277	VRS-TS2AD151J	AA		C	Resistor(1/10W 150Ω ±5%) [R208]
278	VRS-TS2AD151J	AA		C	Resistor(1/10W 150Ω ±5%) [R209]
279	VRS-TS2AD000J	AA		C	Resistor(1/10W 0Ω ±5%) [R210]
280	VRS-TS2AD105J	AA		C	Resistor(1/10W 1.0MΩ ±5%) [R211]
281	VRS-TS2AD000J	AA		C	Resistor(1/10W 0Ω ±5%) [R212]
282	VRS-TS2AD000J	AA		C	Resistor(1/10W 0Ω ±5%) [R213]
283	VRS-TS2AD271J	AA		C	Resistor(1/10W 270Ω ±5%) [R214]
284	VRS-TS2AD000J	AA		C	Resistor(1/10W 0Ω ±5%) [R216]
285	VRS-TS2AD271J	AA		C	Resistor(1/10W 270Ω ±5%) [R217]
286	VRS-TS2AD151J	AA		C	Resistor(1/10W 150Ω ±5%) [R218] [1450DE]
287	VRS-TS2AD000J	AA		C	Resistor(1/10W 0Ω ±5%) [R219]
288	VRS-TS2AD103J	AA		C	Resistor(1/10W 10KΩ ±5%) [R221]
289	VRS-TS2AD151J	AA		C	Resistor(1/10W 150Ω ±5%) [R222] [1450DE]
290	VRS-TS2AD201J	AG		C	Resistor(1/10W 200Ω ±5%) [R224]
291	VRS-TS2AD151J	AA		C	Resistor(1/10W 150Ω ±5%) [R225] [1450DE]
292	VRS-TS2AD271J	AA		C	Resistor(1/10W 270Ω ±5%) [R226]
293	VRS-TS2AD223J	AA		C	Resistor(1/10W 22KΩ ±5%) [R227]
294	VRS-TS2AD151J	AA		C	Resistor(1/10W 150Ω ±5%) [R228] [1450DE]
295	VRS-TS2AD472J	AA		C	Resistor(1/10W 4.7KΩ ±5%) [R229]
296	VRS-TS2AD102J	AA		C	Resistor(1/10W 1.0KΩ ±5%) [R230]
297	VRS-TS2AD223J	AA		C	Resistor(1/10W 22KΩ ±5%) [R231]
298	VRS-TS2AD303J	AA		C	Resistor(1/10W 30KΩ ±5%) [R232]
299	VRS-TS2AD100J	AA		C	Resistor(1/10W 10.0Ω ±5%) [R234]
300	VRS-TS2AD000J	AA		C	Resistor(1/10W 0Ω ±5%) [R235]
301	VRS-TS2AD103J	AA		C	Resistor(1/10W 10KΩ ±5%) [R236]
302	VRS-TS2AD271J	AA		C	Resistor(1/10W 270Ω ±5%) [R237]
303	VRS-TS2AD153J	AA		C	Resistor(1/10W 15KΩ ±5%) [R239]
304	VRS-TS2AD100J	AA		C	Resistor(1/10W 10.0Ω ±5%) [R240]
305	VRS-TS2AD303J	AA		C	Resistor(1/10W 30KΩ ±5%) [R241]
306	VRS-TS2AD472J	AA		C	Resistor(1/10W 4.7KΩ ±5%) [R243]
307	VRS-TS2AD103J	AA		C	Resistor(1/10W 10KΩ ±5%) [R244]
308	VRS-TS2AD102J	AA		C	Resistor(1/10W 1.0KΩ ±5%) [R245]
309	VRS-TS2AD103J	AA		C	Resistor(1/10W 10KΩ ±5%) [R246]
310	VRSTS2AD4752F	AA		C	Resistor(1/10W 47.5KΩ ±1%) [R247]
311	VRS-TS2AD203J	AA		C	Resistor(1/10W 20KΩ ±5%) [R248]
312	VRS-TS2AD302J	AA		C	Resistor(1/10W 3KΩ ±5%) [R249]
313	VRSTS2AD8662F	AA		C	Resistor(1/10W 86.6KΩ ±1%) [R250]
314	VRSTS2AD1742F	AA		C	Resistor(1/10W 17.4KΩ ±1%) [R251]
315	VRSTS2AD8662F	AA		C	Resistor(1/10W 86.6KΩ ±1%) [R253]
316	VRS-TS2AD3R0J	AA		C	Resistor(1/10W 3.0Ω ±5%) [R254]
317	VRS-TS2AD271J	AA		C	Resistor(1/10W 270Ω ±5%) [R255]
318	VRSTS2AD1183F	AA		C	Resistor(1/10W 118KΩ ±1%) [R256]
319	VRS-TS2AD271J	AA		C	Resistor(1/10W 270Ω ±5%) [R257]
320	VRS-TS2AD000J	AA		C	Resistor(1/10W 0Ω ±5%) [R258]
321	VRS-TS2AD103J	AA		C	Resistor(1/10W 10KΩ ±5%) [R259]

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NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
322	VRS-TS2AD103J	AA		C	Resistor(1/10W 10KΩ ±5%) [R260]
323	VRS-TS2AD000J	AA		C	Resistor(1/10W 0Ω ±5%) [R261]
324	VRS-TS2AD000J	AA		C	Resistor(1/10W 0Ω ±5%) [R262]
325	VRS-TS2AD000J	AA		C	Resistor(1/10W 0Ω ±5%) [R264]
326	VRS-TS2AD000J	AA		C	Resistor(1/10W 0Ω ±5%) [R273]
327	VRS-TS2AD100J	AA		C	Resistor(1/10W 10.0Ω ±5%) [R275]
328	VRS-TS2AD822J	AA		C	Resistor(1/10W 8.2KΩ ±5%) [R276]
329	VRS-TS2AD103J	AA		C	Resistor(1/10W 10KΩ ±5%) [R277]
330	VRS-TS2AD333J	AA		C	Resistor(1/10W 33KΩ ±5%) [R281]
331	VRS-TS2AD303J	AA		C	Resistor(1/10W 30KΩ ±5%) [R285]
332	VRS-TS2AD000J	AA		C	Resistor(1/10W 0Ω ±5%) [R286]
333	VRS-TS2AD151J	AA		C	Resistor(1/10W 150Ω ±5%) [R287]
334	VRS-TS2AD103J	AA		C	Resistor(1/10W 10KΩ ±5%) [R288]
335	VRS-TS2AD203J	AA		C	Resistor(1/10W 20KΩ ±1%) [R289]
336	VRS-TS2AD102J	AA		C	Resistor(1/10W 1.0KΩ ±5%) [R290]
337	VRS-TS2AD151J	AA		C	Resistor(1/10W 150Ω ±5%) [R291] [1450DE]
338	VRS-TS2AD151J	AA		C	Resistor(1/10W 150Ω ±5%) [R292] [1450DE]
339	VRS-TS2AD151J	AA		C	Resistor(1/10W 150Ω ±5%) [R293] [1450DE]
340	VRS-TS2AD151J	AA		C	Resistor(1/10W 150Ω ±5%) [R294] [1450DE]
341	VRS-TS2AD303J	AA		C	Resistor(1/10W 30KΩ ±5%) [R295]
342	VRS-TS2AD271J	AA		C	Resistor(1/10W 270Ω ±5%) [R297]
343	VRS-TS2AD271J	AA		C	Resistor(1/10W 270Ω ±5%) [R300]
344	VRS-TS2AD271J	AA		C	Resistor(1/10W 270Ω ±5%) [R301]
345	VRS-TS2AD271J	AA		C	Resistor(1/10W 270Ω ±5%) [R302]
346	VRS-TS2AD271J	AA		C	Resistor(1/10W 270Ω ±5%) [R303]
347	VRS-TS2AD000J	AA		C	Resistor(1/10W 0Ω ±5%) [R304]
348	VRS-TS2AD000J	AA		C	Resistor(1/10W 0Ω ±5%) [R306]
349	VRS-TS2AD000J	AA		C	Resistor(1/10W 0Ω ±5%) [R307]
350	VRS-TS2AD303J	AA		C	Resistor(1/10W 30KΩ ±5%) [R308]
351	VRS-TS2AD820J	AA		C	Resistor(1/10W 82Ω ±5%) [R309] [1450DE]
352	VRS-TS2AD471J	AA		C	Resistor(1/10W 470Ω ±5%) [R310]
353	VRS-TS2AD471J	AA		C	Resistor(1/10W 470Ω ±5%) [R311]
354	VRS-TS2AD471J	AA		C	Resistor(1/10W 470Ω ±5%) [R312]
355	VRS-TS2AD471J	AA		C	Resistor(1/10W 470Ω ±5%) [R313]
356	VRS-TS2AD471J	AA		C	Resistor(1/10W 470Ω ±5%) [R314]
357	VRS-TS2AD471J	AA		C	Resistor(1/10W 470Ω ±5%) [R315]
358	VRS-TS2AD471J	AA		C	Resistor(1/10W 470Ω ±5%) [R316]
359	VRS-TS2AD471J	AA		C	Resistor(1/10W 470Ω ±5%) [R318]
360	VRS-TS2AD271J	AA		C	Resistor(1/10W 270Ω ±5%) [R319]
361	VRS-TS2AD471J	AA		C	Resistor(1/10W 470Ω ±5%) [R320]
362	VRS-TS2AD471J	AA		C	Resistor(1/10W 470Ω ±5%) [R321]
363	VRS-TS2AD471J	AA		C	Resistor(1/10W 470Ω ±5%) [R322]
364	VRS-TS2AD471J	AA		C	Resistor(1/10W 470Ω ±5%) [R324]
365	VRS-TS2AD471J	AA		C	Resistor(1/10W 470Ω ±5%) [R325]
366	VRS-TS2AD271J	AA		C	Resistor(1/10W 270Ω ±5%) [R326]
367	VRS-TS2AD271J	AA		C	Resistor(1/10W 270Ω ±5%) [R327]
368	VRS-TS2AD271J	AA		C	Resistor(1/10W 270Ω ±5%) [R328]
369	VRS-TS2AD000J	AA		C	Resistor(1/10W 0Ω ±5%) [R329]
370	VRS-TS2AD103J	AA		C	Resistor(1/10W 10KΩ ±5%) [R330]
371	RRLYD3130SCZZ	AN	N	B	Relay [RY1]
372	VSRNC1402/-1	AC	N	B	Transistor(RNC1402) [TR100]
373	VSDD114EK/-1	AC		B	Transistor(DD114EK) [TR101]
374	VSRNC1402/-1	AC	N	B	Transistor(RNC1402) [TR102]
375	VSRNC1402/-1	AC	N	B	Transistor(RNC1402) [TR103]
376	VSRNC1402/-1	AC	N	B	Transistor(RNC1402) [TR104]
377	VSRNC1402/-1	AC	N	B	Transistor(RNC1402) [TR105]
378	VS2SC2412KS-1	AB		B	Transistor(2SC2412KS) [TR106]
379	VSDD114EK/-1	AC		B	Transistor(DD114EK) [TR107]
380	VSRNC1402/-1	AC	N	B	Transistor(RNC1402) [TR108]
381	VSRNC1402/-1	AC	N	B	Transistor(RNC1402) [TR109]
382	RCRSB0297AFZZ	AD		B	Crystal(32.768KHz) [X1]
383	RCRSP2080SCZZ	AF		B	Crystal(24.00014MHz) [X2]
384	RCRSZ7008SCZZ	AD		B	Crystal(16MHz) [X3]
385	VHEHZ2C1///-1	AA		B	Zener diode(HZ2C1-TA) [ZD1]
386	VHEHZ2C1///-1	AA		B	Zener diode(HZ2C1-TA) [ZD2]
387	VHERD39F///-1	AF	N	B	Zener diode(RD39F) [ZD3]
388	VHERD39F///-1	AF		B	Zener diode(RD39F) [ZD5]
389	TLABP3078SCZZ	AA		D	Shading label(for EP-ROM)
	(Unit)				
901	CPWBX2859XH01	CC	N	E	Control PWB unit(Without ROM) [1100DE]
	CPWBX2859XH02	CC	N	E	Control PWB unit(Without ROM) [1450DE]

10 TEL-Liu PWB unit

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
1	VHVRA501PV6-1	AE	N	B	Varistor(RA501PV6) [AR2]

10 TEL-Liu PWB unit

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
2	VHVRAS01PV6-1	AE	N	B	Varistor(RA501PV6) [AR3]
3	RALMB2008SCZZ	AG		B	Buzzer(SD120901) [BZ1]
4	VCEAEA1HW105M	AC		C	Capacitor(50WV 1.0μF) [C1]
5	VCEAEA1HW105M	AC		C	Capacitor(50WV 1.0μF) [C2]
6	VCEAEA1EW476M	AB		C	Capacitor(25WV 47μF) [C3]
7	VCEAEA1HW105M	AC		C	Capacitor(50WV 1.0μF) [C4]
8	VCEAEA1HW106M	AA		C	Capacitor(50WV 10μF) [C5]
9	VCE9GA1HW105M	AE	N	C	Capacitor(50WV 10μF) [C6]
10	VCQYNA1HM563J	AB	N	C	Capacitor(50WV 0.056μF) [C7]
11	VCKYPU1HB822K	AB		C	Capacitor(50WV 8200PF) [C8]
12	VCIFYJU2EA564K	AD		C	Capacitor(25WV 0.56μF) [C9]
13	VCKYPU1HB822K	AB		C	Capacitor(50WV 8200PF) [C10]
14	VCEAEA1EW476M	AB		C	Capacitor(25WV 47μF) [C11]
15	VCEAEA1HW476M	AC		C	Capacitor(50WV 47μF) [C12]
16	VCIFYJU2EA105K	AE		C	Capacitor(250WV 1.0μF) [C13]
17	VCKYTV1HB223K	AA		C	Capacitor(50WV 0.022μF) [C101]
18	VCKYTV1HB102K	AA		C	Capacitor(50WV 1000PF) [C102]
19	VCKYTV1HF223Z	AA		C	Capacitor(50WV 0.022μF) [C103]
20	VCKYTV1HB822K	AA		C	Capacitor(50WV 8200PF) [C104]
21	VCKYTV1HB681K	AA		C	Capacitor(50WV 680PF) [C105]
22	VCKYTV1HF223Z	AA		C	Capacitor(50WV 0.022μF) [C106]
23	VCCCTV1HH471J	AA		C	Capacitor(50WV 470PF) [C107]
24	VCKYTQ1HB273K	AC	N	C	Capacitor(50WV 0.027μF) [C109]
25	VCKYTQ1HB473K	AA		C	Capacitor(50WV 0.047μF) [C110]
26	VCKYTV1HF223Z	AA		C	Capacitor(50WV 0.022μF) [C111]
27	VCKYTV1HF223Z	AA		C	Capacitor(50WV 0.022μF) [C112]
28	VCKYTQ1HB104K	AB		C	Capacitor(50WV 0.1μF) [C113]
29	VCKYTV1HB223K	AA		C	Capacitor(50WV 0.022μF) [C114]
30	VCKYTV1HB223K	AA		C	Capacitor(50WV 0.022μF) [C115]
31	RRLYZ3420SCZZ	AR		B	Relay(G6GN-2D) [CML]
32	QCNCW2500SC0H	AF		C	Connector(8pin) [CNLIUA]
33	QCNCW2500SC1B	AF		C	Connector(12pin) [CNLIUB]
34	VHDDSS131/-1	AA		B	Diode(1SS270A) [D1]
35	VHDDSS131/-1	AA		B	Diode(1SS270A) [D2]
36	VHDDSS131/-1	AA		B	Diode(1SS270A) [D3]
37	VHITHS65/-1A	AF		B	IC(THS-65) [IC1]
38	VHINJM4558MF-	AC		B	IC(NJM4558M) [IC101]
39	VHIHEF4066BT1	AF		B	IC(4066) [IC102]
40	VHINJM4558MF-	AC		B	IC(NJM4558M) [IC103]
41	RCILZ2120SCZZ	AD		C	Coil(ZZ120) [L1]
42	RCILZ2120SCZZ	AD		C	Coil(ZZ120) [L2]
43	RCILZ2118SCZZ	AD		C	Coil(Z2118) [L3]
44	RFILN2011SCZZ	AC		C	Coil(SBT-0260) [L4]
45	RCILL0145AFZZ	AF	N	C	Coil(SBT-0180W) [L5]
46	RFILN2011SCZZ	AC		C	Coil(SBT-0260) [L6]
47	VRS-TP2BD000J	AA		C	Resistor(1/8W 0Ω ±5%) [L102]
48	VRS-TP2BD000J	AA		C	Resistor(1/8W 0Ω ±5%) [L103]
49	VRS-TP2BD000J	AA		C	Resistor(1/8W 0Ω ±5%) [L104]
50	QJAKZ2046SCFB	AH		C	Jack [MJ-1/2]
51	VHPTLP521-1BL	AE		B	Photo coupler(TLP521) [PC1]
52	VHPTLP627/-1	AH		B	Photo coupler(TLP627) [PC2]
53	VHPTLP521-1BL	AE		B	Photo coupler(TLP627) [PC3]
54	VHPTLP627/-1	AH		B	Photo coupler(TLP627) [PC4]
55	VHPRPI-574///	AF		B	Photo transistor(RPI-574) [PE2]
56	VSBS108///-1	AE		B	FET(BS108) [Q1]
57	VSDTC114EK/-1	AB		B	Transistor(DTC114EK) [Q101]
58	VS2SC2412KR-1	AD		B	Transistor(2SC2412K) [Q102]
59	VSDTC114EK/-1	AB		B	Transistor(DTC114EK) [Q103]
60	VSDTC114EK/-1	AB		B	Transistor(DTC114EK) [Q104]
61	VSDTC114EK/-1	AB		B	Transistor(DTC114EK) [Q105]
62	VSDTC114EK/-1	AB		B	Transistor(DTC114EK) [Q106]
63	VSDTC114EK/-1	AB		B	Transistor(DTC114EK) [Q107]
64	VSDTC114EK/-1	AB		B	Transistor(DTC114EK) [Q108]
65	VSDTC114EK/-1	AB		B	Transistor(DTC114EK) [Q109]
66	VRS-RE3DA101J	AB		C	Resistor(2W 100Ω ±5%) [R1]
67	VRD-HT2HY150J	AA		C	Resistor(1/2W 15Ω ±5%) [R2]
68	VRD-HT2HY150J	AA		C	Resistor(1/2W 15Ω ±5%) [R3]
69	VRD-HT3AA103J	AC		C	Resistor(10W 10KΩ ±5%) [R4]
70	VRD-HT2HY223J	AA		C	Resistor(1/2W 22KΩ ±5%) [R5]
71	VRS-TS2AD000J	AA		C	Resistor(1/10W 0Ω ±5%) [R102]
72	VRS-TS2AD101J	AA		C	Resistor(1/10W 100Ω ±5%) [R103]
73	VRS-TS2AD101J	AA		C	Resistor(1/10W 100Ω ±5%) [R104]
74	VRS-TS2AD103J	AA		C	Resistor(1/10W 10KΩ ±5%) [R105]
75	VRS-TS2AD683J	AA		C	Resistor(1/10W 68KΩ ±5%) [R107]
76	VRS-TS2AD103J	AA		C	Resistor(1/10W 10KΩ ±5%) [R108]
77	VRS-TS2AD103J	AA		C	Resistor(1/10W 10KΩ ±5%) [R109]
78	VRS-TS2AD222J	AA		C	Resistor(1/10W 2.2KΩ ±5%) [R110]
79	VRS-TS2AD303J	AA		C	Resistor(1/10W 30KΩ ±5%) [R111]
80	VRS-TS2AD563J	AA		C	Resistor(1/10W 56KΩ ±5%) [R112]
81	VRS-TS2AD104J	AA		C	Resistor(1/10W 100KΩ ±5%) [R113]

10 TEL-Liu PWB unit

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
82	VRS-TS2AD221J	AA		C	Resistor(1/10W 220Ω ±5%) [R114]
83	VRS-TS2AD221J	AA		C	Resistor(1/10W 220Ω ±5%) [R115]
84	VRS-TS2AD223J	AA		C	Resistor(1/10W 22KΩ ±5%) [R116]
85	VRS-TS2AD622J	AA		C	Resistor(1/10W 6.2KΩ ±5%) [R117]
86	VRS-TS2AD333J	AA		C	Resistor(1/10W 33KΩ ±5%) [R118]
87	VRS-TS2AD203J	AA		C	Resistor(1/10W 20KΩ ±5%) [R119]
88	VRS-TS2AD103J	AA		C	Resistor(1/10W 10KΩ ±5%) [R120]
89	VRS-TS2AD133J	AA		C	Resistor(1/10W 13KΩ ±5%) [R121]
90	VRS-TS2AD000J	AA		C	Resistor(1/10W 0Ω ±5%) [R122]
91	VRSTS2AD1202F	AB	N	C	Resistor(1/10W 12KΩ ±1%) [R124]
92	VRS-TS2AD122J	AA		C	Resistor(1/10W 1.2KΩ ±5%) [R125]
93	VRSTS2AD3602F	AA		C	Resistor(1/10W 36KΩ ±1%) [R126]
94	VRS-TS2AD221J	AA		C	Resistor(1/10W 220Ω ±5%) [R127]
95	VRS-TS2AD100J	AA		C	Resistor(1/10W 10Ω ±5%) [R128]
96	VRS-TS2AD103J	AA		C	Resistor(1/10W 10KΩ ±5%) [R129]
97	VRS-TS2AD100J	AA		C	Resistor(1/10W 10Ω ±5%) [R130]
98	VRS-TS2AD221J	AA		C	Resistor(1/10W 220Ω ±5%) [R131]
99	VRS-TS2AD153J	AA		C	Resistor(1/10W 15KΩ ±5%) [R132]
100	VRS-TS2AD153J	AA		C	Resistor(1/10W 15KΩ ±5%) [R133]
101	VRS-TS2AD103J	AA		C	Resistor(1/10W 10KΩ ±5%) [R134]
102	VRS-TS2AD000J	AA		C	Resistor(1/10W 0Ω ±5%) [R135]
103	RH-DX2007SCZZ	AC		B	Bridge diode(S1ZB60) [REC1]
104	RTRNI2142XHZZ	AR		B	Transformer(I2142) [T1]
105	VHVTN07G101-1	AB		B	Varistor(TNR07G101) [VA1]
106	VHEHZ3B1///-1	AB		B	Zener diode(HZ3B1-TA) [ZD1]
107	VHEHZ3B1///-1	AB		B	Zener diode(HZ3B1-TA) [ZD2]
108	VHEMTZ6R8B/-1	AB		C	Zener diode(MTZ6.8B) [ZD3]
109	VHEMTZJ300B-1	AA		B	Zener diode(MTZJ30B) [ZD4]
110	VHEHZ3B1///-1	AB		B	Zener diode(HZ131-TA) [ZD5]
111	VHEHZ3B1///-1	AB		B	Zener diode(HZ3B1-TA) [ZD6]
112	VHEMTZJ300B-1	AA		B	Zener diode(MTZJ30B) [ZD7]
	(Unit)				
901	DCEKL317BXH01	BK	N	E	TEL/Liu PWB unit

11 Power supply PWB unit

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
1	0CBUGFZ104GQ/	AF	N	C	Capacitor(PA104-C) [C1]
2	0CBUGFZ104GQ/	AF		C	Capacitor(PA104-C) [C2]
3	0CBUGCM102AT/	AE		C	Capacitor(DE7090-1B102KVA1-H) [C3]
4	0CBUGCM102AT/	AE		C	Capacitor(DE7090-1B102KVA1-H) [C4]
5	0CBUGZ1072ZZ/	AN	N		Capacitor(KMF400VB68M 18×30) [C5]
6	0CBUGCU102BQ/	AC		C	Capacitor(DE0905-1R102K1K-MHR) [C6]
7	0CBUGCU221BQ/	AD		C	Capacitor(DE0705-1R221K1K-MHR) [C7]
8	0CBUGFF472AR/	AB		C	Capacitor(AMZ-472K50) [C8]
9	0CBUGFF683AR/	AD		C	Capacitor(AMZ-683K50) [C9]
10	0CBUGFF222AR/	AB		C	Capacitor(AMZ-222K50) [C11]
11	0CBUGCM222AU/	AD	N	C	Capacitor(DE7100-1F222MVA1-H) [C12]
12	0CBUGCS222AP/	AC		C	Capacitor(DD08-63E222P500) [C14]
13	0CBUGAE821TS/	AH	N	C	Capacitor(LXJ35VB820(M)MC-12.5) [C15]
14	0CBUGAC471TS/	AF	N	C	Capacitor(LXJ16VB470(M)MC-10) [C16]
15	0CBUGAC101HD/	AC		C	Capacitor(UVZ1C101MAH1AA) [C17]
16	0CBUGCF471CB/	AD		C	Capacitor(DD104-989B471KS0) [C18]
17	0CBPKZ0194ZZ/	AC		C	Connector(B2P3-VH) [CN1]
18	0CBPCZ0193ZZ/	AF		C	Connector(08P-FJ) [CN2]
19	0CBPCZ0160ZZ/	AE		C	Connector(M1698(MEP1698)) [CN3-1]
20	0CBPZZ0739ZZ/	AE		C	Bush(M1773(MOL1773)) [CN3-2]
21	0CBUBA0004AZ/	AB		B	Diode(1SS53) [D1]
22	0CBUBC0248AZ/	AD		B	Diode(05NU42) [D2]
23	0CBUBA0004AZ/	AB		B	Diode(1SS53) [D3]
24	0CBUBB0224AZ/	AK	N	B	Diode stack(SF5LC20U) [D4]
25	0CBUBC0302AZ/	AE	N	B	Diode(SR140) [D5]
26	0CBUBC0215DK/	AD	N	B	Diode(RL1N4005-F) [D6]
27	0CBUBC0215DK/	AD	N	B	Diode(RL1N4005-F) [D7]
28	0CBUBC0215DK/	AD	N	B	Diode(RL1N4005-F) [D8]
29	0CBUBC0215DK/	AD	N	B	Diode(RL1N4005-F) [D9]
30	0CBPJCTY1251/	AK	N	A	Current fuse(2151.25 ME600) [F1]
31	0CBPJCTY1251/	AK		A	Current fuse(2151.25 ME600) [F2]
32	0CBUCB0107AZ/	AQ		B	IC(NJM78M05FA) [IC2]
33	0CBUKZ0826ZZ/	AK	N	B	Filter(ELF15N003A) [L1]
34	0CBLRZ6251ZQ/	AP	N	B	Shassis(W4020-5001ATEZS) [MT1]
35	0CBLRZ6252ZP/	AP	N	B	Heat sink(W4020-5002AT TC) [MT2]
36	0CBUDC0163BB/	AH	N	B	Photo coupler(PC123FY8) [PC1]
37	0CBUAG0139AZ/	AQ	N	B	FET(2SK2483) [Q1]
38	0CBUAC0027AZ/	AE		B	Transistor(2SC2655) [Q2]
39	0CBUAC0023AZ/	AD	N	B	Transistor(2SC2185) [Q3]

11 Power supply PWB unit

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
40	0CBUAC0023AZ/	AD	N	B	Transistor(2SC1815) [Q4]
41	0CBUEFC564BA/	AC		C	Resistor(SFR25H560K(52)) [R1]
42	0CBUEFER27CH/	AE	N	C	Resistor(2R27J) [R2]
43	0CBUEEB153CT/	AC		C	Resistor(RD16S-T26-153J) [R3]
44	0CBUEEB471CT/	AC		C	Resistor(RD16S-T26-471J) [R4]
45	0CBUEEB564CT/	AC	N	C	Resistor(RD16S-T26-564J) [R5]
46	0CBUEEB564CT/	AC		C	Resistor(RD16S-T26-564J) [R6]
47	0CBUEFE563CL/	AD		C	Resistor(RSS2-L15-563J) [R7]
48	0CBUEFE563CL/	AD	N	C	Resistor(RSS2-L15-563J) [R8]
49	0CBUEFD391CC/	AD		C	Resistor(RSS1-T52-391J) [R9]
50	0CBUEEB220CW/	AC		C	Resistor(RDF16S-T26-220J) [R10]
51	0CBUEFD271CC/	AD		C	Resistor(RSS1-T52-271J) [R11]
52	0CBUEEC222BS/	AC		C	Resistor(RDF50SS-T26-222J) [R12]
53	0CBUEEB271CT/	AC		C	Resistor(RD16S-T26-271J) [R13]
54	0CBUEEB682CT/	AC		C	Resistor(RD16S-T26-682J) [R14]
55	0CBUEEB242CT/	AC		C	Resistor(RD16S-T26-242J) [R15]
56	0CBUEFF102BK/	AD		C	Resistor(RSS3-L20-102J) [R16]
57	0CB829650012/	BD		B	Transformer(PT-P88-KTT) [T1]
58	0CBUDZ0052ZZ/	AG		B	Thermistor(M16007C) [TH1]
59	0CBUEZ0524ZZ/	AD		B	Varistor(JVR7N471K-S) [V1]
60	0CBUFBA501DH/	AC		B	Variable resisor(KVSF637T TB501) [VR1]
61	0CBUBDBW3R6B/	AB		B	Zener diode(MTZJ T-72 3.6A) [ZD2]
62	0CBUBDAE300D/	AD		B	Zener diode(RD30FB3) [ZD3]
63	0CBUBDBW6R2C/	AB		B	Zener diode(MTZJ T-72 6.2B) [ZD4]
	(Unit)				
901	RDEMT2100XHZZ	BQ	N	E	Power supply PWB unit

12 CCD PWB unit

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
1	VCEAEA1HW226M	AB		C	Capacitor(50WV 22μF) [C1]
2	VCKYPU1HF223Z	AA		C	Capacitor(50WV 0.022μF) [C2]
3	VHITCD1208P-1	AX		B	IC(TCD1208GL) [IC1]
4	VS2SC1815GR-1	AB		B	Transistor(2SC1815GR) [Q1]
5	VRD-RC2EY222J	AA		C	Resistor(1/4W 2.2KΩ ±5%) [R1]
6	VRD-RC2EY390J	AA		C	Resistor(1/4W 39Ω ±5%) [R2]
7	QCNW-4553XHZZ	AK	N	C	CCD cable
	(Unit)				
901	DCEKD475AXH01	BD	N	E	CCD PWB unit

13 Joint PWB unit

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
1	QCNCM7014SC0G	AB		C	Connector(7pin) [CNCCD1]
2	QCNCM7014SC0I	AB		C	Connector(9pin) [CNCCD2]
3	QCNCM2442SC0B	AB		C	Conector(21pin) [CNCSW]
4	QCNCM7014SC0B	AD		C	Connector(2pin) [CNLED]
5	QCNCM7014SC0F	AB		C	Connector(6pin) [CNMT1]
6	QCNCM7014SC0H	AB		C	Connector(8pin) [CNMT2]
	(Unit)				
901	CPWBF2833XH01	AL	N	E	Joint PWB unit

50 Hardware parts

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
B1	LX-BZ2210XHZZ	AC	N	C	Screw
B2	XBPSD30P06K00	AA		C	Screw(3×6K)
B3	XEPSD30P06K00	AB	N	C	Screw(3×6K)
B4	XBPSE30P08K00	AA		C	Screw(3×8K)
B5	XEBSD30P08000	AA		C	Screw(M3×8)
B6	XEBSE30P08000	AA		C	Screw(M3×8)
B7	XEBSF30P12000	AA		C	Screw(3×12)
B8	XHBSD26P05000	AC	N	C	Screw(2.6×5)
B9	XHBSD30P05000	AA		C	Screw(3×5)
B10	XBPSN40P06K00	AA		C	Screw(4×6)
B11	LX-BZ2205XHZZ	AC	N	C	Screw
B12	XUBSD20P06000	AA		C	Screw(2×6)

Index

PARTS CODE	NO.	PRICE RANK	NEW MARK	PART RANK
[C]				
CGERH2306XH01	1- 44	AF	N	C
CGERH2314XH01	5- 19	AF	N	C
CLEVP2221XH01	5- 1	AN	N	C
CLEVP2222XH01	5- 2	AN	N	C
CLEVP2223XH01	5- 3	AN	N	C
CLEVP2224XH01	5- 4	AN	N	C
CPNLH2367XH07	1- 2	BQ	N	E
"	2- 901	BQ	N	E
CPNLH2367XH08	1- 2	BM	N	E
"	2- 901	BM	N	E
CPWBF2833XH01	1- 88	AL	N	E
"	13- 901	AL	N	E
CPWBX2859XH01	1- 4	CC	N	E
"	9- 901	CC	N	E
CPWBX2859XH02	1- 4	CC	N	E
"	9- 901	CC	N	E
CROLR2329XH01	1- 55	AR	N	C
CROLR2331XH01	1- 57	AR	N	C
CSW-M2220SC01	1- 3	AE	N	C
[D]				
DCEKD475AXH01	4- 1	BD	N	E
"	12- 901	BD	N	E
DCEKL317BXH01	1- 5	BK	N	E
"	10- 901	BK	N	E
DCEKP477AXH01	2- 1	BN	N	E
[G]				
GCABA2269XHSD	2- 2	AQ	N	D
GCABA2269XHSH	2- 2	AQ	N	D
GCABB2270XHSE	1- 6	BE	N	D
GCABB2270XHSE	1- 6	BE	N	D
GCOVA2362XHSA	1- 7	AV	N	D
GCOVA2362XHSC	1- 7	AV	N	D
GDAI-2076XHSA	1- 8	AR	N	C
GDAI-2076XHSE	1- 8	AR	N	C
GLEGG2063XHZZ	1- 9	AC	N	C
[H]				
HPNLH2367XHSD	2- 3	AL	N	D
HPNLH2367XHSE	2- 3	AL	N	D
[J]				
JBTN-2174XHSA	2- 4	AK	N	C
JBTN-2174XHSC	2- 4	AK	N	C
JBTN-2175XHSA	2- 5	AG	N	C
JBTN-2175XHSC	2- 5	AG	N	C
JBTN-2176XHSA	2- 6	AE	N	C
JBTN-2178XHSA	2- 7	AD	N	C
JBTN-2179XHSA	2- 8	AD	N	C
JBTN-2180XHSA	2- 9	AD	N	C
JBTN-2180XHSC	2- 9	AD	N	C
[L]				
LBNDJ2006XHZZ	1- 91	AA		C
"	6- 21	AA		C
LBSHP2057XHZZ	1- 10	AB		C
LBSHP2078XHZZ	8- 2	AC	N	C
LFRM-2164XHZZ	4- 2	AQ	N	C
LFRM-2165XHZZ	6- 23	AS	N	C
LFRM-2166XHZA	5- 5	AS	N	C
LPLTG2707XHZZ	3- 1	AE		C
LPLTM2791XHFW	1- 13	AD	N	C
LPLTM2795XHFW	5- 7	AE	N	C
LPLTM2796XHFW	7- 9	AP	N	C
LPLTM2798XHZZ	1- 14	AR	N	C
LPLTP2790XHZZ	3- 2	AD	N	C
LPLTP2797XHZZ	8- 4	AP	N	C
LPLTP2797XHZZ	8- 4	AP	N	C
LSTPF2046XHZZ	1- 16	AF	N	C
LSTPP2044XHZZ	1- 17	AF	N	C
LX-BZ2205XHZZ	50- B11	AC	N	C
LX-BZ2210XHZZ	50- B1	AC	N	C
[M]				
MCAMP2021XHZZ	5- 10	AD	N	C
MLEVP2214XHZZ	3- 3	AC	N	C
MLEVP2215XHZZ	3- 4	AF	N	C
MLEVP2217XHZZ	1- 22	AD	N	C
MLEVP2218XHZZ	1- 23	AD	N	C
MLEVP2219XHZZ	6- 1	AC	N	C
MLEVP2220XHZZ	6- 2	AC	N	C
MLEVP2225XHZZ	7- 4	AF	N	C
MLEVP2226XHZZ	7- 5	AF	N	C
MLEVP2227XHZZ	7- 8	AC	N	C

PARTS CODE	NO.	PRICE RANK	NEW MARK	PART RANK
MSPRC2818XHJF	1- 26	AC	N	C
MSPRC2819XHJF	6- 3	AC	N	C
MSPRC2825XHJF	7- 7	AD	N	C
MSPRC2832XHZZ	1- 30	AC	N	C
MSPRC2834XHZZ	1- 93	AD	N	C
MSPRC2876XHJF	6- 20	AD	N	C
MSPRC2880XHJF	6- 24	AD	N	C
MSPRD2814XHZZ	3- 6	AC	N	C
MSPRD2816XHJF	1- 34	AD	N	C
MSPRD2820XHJF	6- 4	AE	N	C
MSPRD2821XHJF	6- 5	AC	N	C
MSPRD2822XHJF	6- 6	AC	N	C
MSPRD2823XHJF	6- 7	AC	N	C
MSPRD2827XHJF	5- 12	AC	N	C
MSPRD2829XHJF	6- 8	AE	N	C
MSPRD2812XHZZ	3- 7	AE	N	C
MSPRP2817XHZZ	4- 3	AC	N	C
MSPRT2813XHZZ	3- 8	AC	N	C
MSPRP2815XHJF	3- 9	AC	N	C
MSPRT2826XHJF	7- 6	AC	N	C
[N]				
NBLTK2054XHZZ	1- 43	AE	N	C
NBRGP2141XHZZ	3- 17	AH		C
NGERH2276XHZZ	5- 13	AC		C
NGERH2277XHZZ	5- 14	AC		C
NGERH2279XHZZ	5- 15	AC		C
NGERH2305XHZZ	3- 18	AC	N	C
NGERH2307XHZZ	1- 45	AD	N	C
NGERH2309XHZZ	1- 47	AC	N	C
NGERH2310XHZZ	1- 48	AE	N	C
NGERH2311XHZZ	5- 16	AD	N	C
NGERH2312XHZZ	5- 17	AD	N	C
NGERH2313XHZZ	5- 18	AD	N	C
NGERH2315XHZZ	8- 10	AE	N	C
NGERH2316XHZZ	3- 10	AC	N	C
NGERH2317XHZZ	3- 11	AC	N	C
NGERP2318XHZZ	1- 51	AD	N	C
NROLP2332XHZZ	1- 52	AD	N	C
"	6- 9	AD	N	C
NROLP2334XHZZ	1- 89	AE	N	C
"	3- 12	AE	N	C
NROLR2327XHZZ	3- 16	AQ	N	C
NROLR2328XHZZ	1- 54	AP	N	C
NROLR2330XHZA	1- 56	AV	N	C
NROLR2333XHZZ	1- 58	AP	N	C
NROLS2351XHZZ	1- 94	AV	N	C
NSFTZ2257XHZZ	3- 13	AG	N	C
NSFTZ2258XHZZ	1- 60	AG	N	C
[P]				
PCASA2033XHSA	7- 1	AP	N	C
PCASA2033XHSE	7- 1	AN	N	C
PCOVA2108XHSA	7- 3	AR	N	C
PCOVO2110XHZZ	1- 63	AF	N	C
PCOVO2111XHZZ	6- 10	AK	N	C
PCUSS2100XHZZ	7- 12	AC	N	C
PFLT-2006XHZZ	4- 18	AA	N	C
PFLT-2009XHZZ	1- 65	AD	N	C
PGIDM2445XHZZ	6- 11	AL	N	C
PGIDM2447XHSA	1- 68	AV	N	C
PGIDM2447XHSC	1- 68	AV	N	C
PGIDM2448XHZZ	6- 12	AF	N	C
PGIDM2448XHZZ	6- 13	AF	N	C
PGIDM2449XHSA	1- 71	AF	N	C
PGIDM2449XHSC	1- 71	AF	N	C
PGIDM2450XHSA	1- 72	AF	N	C
PGIDM2450XHSC	1- 72	AF	N	C
PGIDM2474XHZZ	3- 14	AF	N	C
PGLSP2056XHZZ	4- 4	AE	N	C
PGUMS2142XHZZ	2- 10	AC	N	C
PLNS-2049XHZZ	4- 5	AZ	N	C
PMIR-2070XHZZ	4- 6	AG	N	C
PMIR-2071XHZZ	4- 7	AH	N	C
PMIR-2072XHZZ	4- 8	AH	N	C
PSEL-2014SCZA	7- 10	AC	N	C
PSHEZ3031XHZZ	1- 73	AA		C
PSHEZ3195SCZZ	2- 13	AN	N	C
PSHEZ3196XHZZ	4- 9	AC	N	C
PSHEZ3197XHZZ	6- 14	AD	N	C
PSHEZ3199XHZZ	3- 15	AD	N	C
PSHEZ3220XHZZ	1- 107	AC	N	C

PARTS CODE	NO.	PRICE RANK	NEW MARK	PART RANK
PSHEZ3222XHZZ	1- 96	AC	N	C
PSHEZ3223XHZZ	1- 97	AC	N	C
PSHEZ3224XHZZ	1- 98	AE	N	C
PSHEZ3238XHZZ	4- 17	AC	N	C
PSHEZ3239XHZZ	3- 19	AD	N	C
PSHEZ3240XHZZ	4- 15	AC	N	C
PSHEZ3241XHZZ	4- 16	AC	N	C
PSHEZ3242XHZZ	4- 14	AC	N	C
PSHEZ3245XHZZ	4- 13	AC	N	C
PSHEZ3246XHZZ	1- 99	AC	N	C
PSHEZ3251XHZZ	1- 101	AC	N	C
PSHEZ3253XHZZ	1- 105	AC	N	C
PSHEZ3259SCZZ	8- 36	AC	N	D
PSPA2221XHZZ	4- 10	AE	N	C
PSPA2221XHZZ	1- 92	AE	N	C
PSPA2221XHZZ	1- 106	AE	N	C
[Q]				
QACCV2016XHZZ	1- 76	AC	N	B
QCNCM2442SC0B	9- 125	AB		C
"	13- 3	AB		C
QCNCM2499SC0H	9- 126	AE	N	C
QCNCM2499SC1B	9- 127	AF	N	C
QCNCM7014SC0B	9- 132	AD		C
"	13- 4	AD		C
QCNCM7014SC0F	13- 5	AB		C
QCNCM7014SC0G	13- 1	AB		C
QCNCM7014SC0H	9- 128	AB		C
"	13- 6	AB		C
QCNCM7014SC0I	9- 124	AB		C
"	13- 2	AB		C
QCNCM7014SC1D	9- 133	AC	N	C
QCNCM7014SC1F	9- 130	AD	N	C
QCNCW2500SC0H	9- 131	AF		C
"	10- 32	AF		C
QCNCW2500SC1B	10- 33	AF		C
QCNCW2523SC4J	9- 129	AQ	N	C
QCNCW-4544XHZZ	4- 11	AE	N	C
QCNCW-4546XHZZ	6- 15	AF	N	C
QCNCW-4547XHZZ	6- 16	AQ	N	C
QCNCW-4549XHZZ	1- 79	AF	N	C
QCNCW-4550XHZZ	5- 21	AE	N	C
QCNCW-4553XHZZ	12- 7	AK	N	C
QCNCW-4584XHZZ	1- 80	AT	N	C
QCNCW-4594XHZZ	1- 81	AN	N	C
QCNCW-4595XHZZ	1- 82	AN	N	C
QCNCW-4596XHZZ	6- 17	AM	N	C
QJAKZ2046SCFB	10- 50	AH		C
QSOCZ2053XH32	9- 141	AK		C
QSW-F2224SCZZ	5- 22	AE		B
QSW-F2229XHZZ	6- 18	AG	N	B
[R]				
RALMB2008SCZZ	10- 3	AG		B
RCILLO145AFZZ	10- 45	AF	N	C
RCILZ2118SCZZ	10- 43	AD		C
RCILZ2120SCZZ	10- 41	AD		C
"	10- 42	AD		C
RCILZ2131SCZZ	9- 156	AC	N	C
"	9- 157	AC	N	C
"	9- 160	AC	N	C
RCILZ2132SCZZ	9- 164	AD	N	C
RCILZ2133SCZZ	9- 166	AC	N	C
RCORF2063XHZZ	1- 100	AF		B
RCORF2064XHZZ	1- 95	AF		B
"	6- 22	AF		B
RCORF2098SCZZ	9- 162	AE		C
RCRSB0297AFZZ	9- 382	AD		B
RCRSP2080SCZZ	9- 383	AF		B
RCRSZ7008SCZZ	9- 384	AD		B
RDENT2100XHZZ	1- 85	BQ	N	E
"	11- 901	BQ	N	E
RFILN2011SCZZ	10- 44	AC		C
"	10- 46	AC		C
RH-DX2007SCZZ	10- 103	AC		B
RHEDZ2049SC02	6- 19	BM	N	B
RMOTZ2123XHZZ	5- 23	BB	N	B
RRLYD3130SCZZ	9- 371	AN	N	B
RRLYZ3420SCZZ	10- 31	AR		B
RTRN12142XHZZ	10- 104	AR		B
[S]				
SPAKA4832XHZZ	8- 19	AF	N	D

PARTS CODE	NO.	PRICE RANK	NEW MARK	PART RANK
SPAKA4833XHYZ	8- 20	AQ	N	D
SPAKA4851XHZZ	8- 23	AE	N	D
SPAKA4978XHZZ	8- 35	AE	N	D
SPAKA4989XHZL	8- 21	AL	N	D
SPAKA4989XHZR	8- 22	AL	N	D
SPAKC4930XHZZ	8- 25	AT	N	D
SPAKC4931XHZZ	8- 25	AT	N	D
SPAKP4381XHZZ	8- 32	AG		D
[T]				
TCAD-2438XHZZ	8- 34	AE	N	D
TINSG3614XHZZ	8- 27	AS	N	D
TINSG3618XHZZ	8- 27	AS	N	D
TLABH3910XHZZ	7- 11	AE	N	D
TLABH3911XHZZ	8- 29	AD	N	D
TLABP3078SCZZ	9- 389	AA		D
[U]				
UBATL2033SCZZ	9- 1	AK		B
[V]				
VCCCTV1HH101J	9- 52	AA		C
"	9- 55	AA		C
"	9- 56	AA		C
"	9- 57	AA		C
"	9- 59	AA		C
"	9- 62	AA		C
"	9- 63	AA		C
"	9- 67	AA		C
"	9- 78	AA		C
"	9- 112	AA		C
VCCCTV1HH150J	9- 31	AA		C
"	9- 35	AA		C
"	9- 110	AA		C
VCCCTV1HH270J	9- 79	AC		C
"	9- 81	AC		C
VCCCTV1HH300J	9- 82	AA		C
"	9- 83	AA		C
VCCCTV1HH471J	10- 23	AA		C
VCCCTV1HH510J	9- 76	AA		C
VCCCTV1HH560J	9- 42	AA		C
"	9- 45	AA		C
"	9- 48	AA		C
"	9- 50	AA		C
"	9- 66	AA		C
"	9- 68	AA		C
"	9- 71	AA		C
"	9- 72	AA		C
"	9- 73	AA		C
"	9- 74	AA		C
"	9- 115	AA		C
VCCSTV1HL102J	9- 96	AA		C
VCCSTV1HL391J	9- 93	AA		C
VCEAEA1EW476M	10- 6	AB		C
"	10- 14	AB		C
VCEAEA1HW105M	10- 4	AC		C
"	10- 5	AC		C
"	10- 7	AC		C
VCEAEA1HW106M	10- 8	AA		C
VCEAEA1HW226M	12- 1	AB		C
VCEAEA1HW476M	10- 15	AC		C
VCEAGA1HW106M	9- 2	AA		C
"	9- 4	AA		C
"	9- 6	AA		C
VCEAGA1HW107M	9- 9	AA		C
VCEAGA1HW226M	9- 5	AB	N	C
"	9- 7	AB	N	C
"	9- 8	AB	N	C
"	9- 10	AB	N	C
"	9- 11	AB	N	C
"	9- 12	AB	N	C
VCEAGA1HW475M	9- 3	AA		C
VCE9GA1HW105M	10- 9	AE	N	C
VCFYJU2EA105K	10- 16	AE		C
VCFYJU2EA564K	10- 12	AD		C
VCKYPU1HB822K	10- 11	AB		C
"	10- 13	AB		C
VCKYPU1HF223Z	12- 2	AA		C
VCKYTQ1HB102K	9- 118	AA		C
"	9- 119	AA		C
"	9- 121	AA		C
"	9- 122	AA		C
"	9- 123	AA		C

PARTS CODE	NO.	PRICE RANK	NEW MARK	PART RANK
VCKYTQ1HB104K	10- 28	AB		C
VCKYTQ1HB273K	10- 24	AC	N	C
VCKYTQ1HB473K	10- 25	AA		C
VCKYTQ1HF104Z	9- 32	AA		C
"	9- 106	AA		C
"	9- 114	AA		C
VCKYTV1CF105Z	9- 13	AB		C
"	9- 30	AB		C
"	9- 38	AB		C
"	9- 39	AB		C
"	9- 43	AB		C
"	9- 47	AB		C
"	9- 51	AB		C
"	9- 53	AB		C
"	9- 54	AB		C
"	9- 61	AB		C
"	9- 64	AB		C
"	9- 70	AB		C
"	9- 77	AB		C
"	9- 85	AB		C
"	9- 88	AB		C
"	9- 90	AB		C
"	9- 91	AB		C
"	9- 92	AB		C
"	9- 95	AB		C
"	9- 99	AB		C
"	9- 102	AB		C
"	9- 111	AB		C
VCKYTV1EB104K	9- 94	AA		C
"	9- 100	AA		C
VCKYTV1EF104Z	9- 14	AA		C
"	9- 17	AA		C
"	9- 19	AA		C
"	9- 25	AA		C
"	9- 29	AA		C
"	9- 34	AA		C
"	9- 60	AA		C
"	9- 65	AA		C
"	9- 75	AA		C
"	9- 87	AA		C
"	9- 101	AA		C
"	9- 104	AA		C
"	9- 107	AA		C
"	9- 108	AA		C
"	9- 113	AA		C
VCKYTV1HB102K	9- 20	AA		C
"	9- 21	AA		C
"	9- 22	AA		C
"	9- 24	AA		C
"	9- 33	AA		C
"	9- 36	AA		C
"	9- 37	AA		C
"	9- 40	AA		C
"	9- 44	AA		C
"	9- 46	AA		C
"	9- 49	AA		C
"	9- 58	AA		C
"	9- 69	AA		C
"	9- 98	AA		C
"	9- 116	AA		C
"	9- 117	AA		C
"	9- 120	AA		C
"	10- 18	AA		C
VCKYTV1HB103K	9- 80	AB		C
VCKYTV1HB222K	9- 15	AA		C
"	9- 16	AA		C
"	9- 18	AA		C
"	9- 41	AA		C
"	9- 84	AA		C
"	9- 86	AA		C
"	9- 89	AA		C
"	9- 109	AA		C
VCKYTV1HB223K	10- 17	AA		C
"	10- 29	AA		C
"	10- 30	AA		C
VCKYTV1HB332K	9- 23	AA		C
"	9- 26	AA		C
"	9- 27	AA		C
"	9- 28	AA		C
VCKYTV1HB681K	9- 97	AA		C

PARTS CODE	NO.	PRICE RANK	NEW MARK	PART RANK
VCKYTV1HB681K	10- 21	AA		C
VCKYTV1HB822K	10- 20	AA		C
VCKYTV1HF223Z	10- 19	AA		C
"	10- 22	AA		C
"	10- 26	AA		C
"	10- 27	AA		C
VCQYNA1HM563J	10- 10	AB	N	C
VHDDAP202U/-1	9- 134	AB		B
VHDDSS131/-1	10- 34	AA		B
"	10- 35	AA		B
"	10- 36	AA		B
VHD1SS355/-1	9- 135	AB		B
"	9- 136	AB		B
"	9- 137	AB		B
"	9- 138	AB		B
"	9- 139	AB		B
VHEHZ2C1///-1	9- 385	AA		B
"	9- 386	AA		B
VHEHZ3B1///-1	10- 106	AB		B
"	10- 107	AB		B
"	10- 110	AB		B
"	10- 111	AB		B
VHEMTZJ300B-1	10- 109	AA		B
"	10- 112	AA		B
VHEMTZ6R8B/-1	10- 108	AB		C
VHERD39F///-1	9- 387	AF	N	B
"	9- 388	AF		B
VHIEHF4066BT1	9- 147	AF	N	B
"	10- 39	AF		B
VHIHM514800J8	9- 150	BG		B
VHIMC74HCU04F	9- 152	AD		B
VHIMTD1120F-1	9- 148	AQ	N	B
VHIM5255CF70L	9- 149	AW		B
VHINJM2902M-1	9- 155	AF	N	B
VHINJM2903M/-	9- 151	AD		B
VHINJM318M/-F	9- 146	AF		B
VHINJM4558MF-	9- 154	AC		B
"	10- 38	AC		B
"	10- 40	AC		B
VHIPST591CMT1	9- 153	AE		B
VHIR96CIDXMVP	9- 144	BH	N	B
"	9- 145	BH	N	B
VHITCD1208P-1	12- 3	AX		B
VHITHS65//1A	10- 37	AF		B
VHI27020FGCOF	9- 141	BC		B
VHPRPI-574///	9- 169	AF		B
"	10- 55	AF		B
VHPSNK15A24-1	4- 12	AZ	N	B
VHPTLP521-1BL	10- 51	AE		B
"	10- 53	AE		B
VHPTLP627//1	10- 52	AH		B
"	10- 54	AH		B
VHVICPS07//1	9- 140	AA		B
VHVRA501PV6-1	10- 1	AE	N	B
"	10- 2	AE	N	B
VHVTN07G101-1	10- 105	AB		B
VRD-HT2EY100J	9- 168	AA		C
VRD-HT2HY150J	10- 67	AA		C
"	10- 68	AA		C
VRD-HT2HY223J	10- 70	AA		C
VRD-HT3AA103J	10- 69	AC		C
VRD-RC2EY222J	12- 5	AA		C
VRD-RC2EY390J	12- 6	AA		C
VRS-RE2HA1R0J	9- 170	AC	N	C
"	9- 171	AC	N	C
VRS-RE3DA101J	10- 66	AB		C
VRS-TP2BD000J	9- 158	AA		C
"	9- 159	AA		C
"	9- 163	AA		C
"	9- 167	AA		C
"	10- 47	AA		C
"	10- 48	AA		C
"	10- 49	AA		C
VRS-TS2AD000J	9- 103	AA		C
"	9- 105	AA		C
"	9- 165	AA		C
"	9- 235	AA		C
"	9- 271	AA		C
"	9- 279	AA		C
"	9- 281	AA		C

PARTS CODE	NO.	PRICE RANK	NEW MARK	PART RANK
VRS-TS2AD000J	9- 282	AA		C
"	9- 284	AA		C
"	9- 287	AA		C
"	9- 300	AA		C
"	9- 320	AA		C
"	9- 323	AA		C
"	9- 324	AA		C
"	9- 325	AA		C
"	9- 326	AA		C
"	9- 332	AA		C
"	9- 347	AA		C
"	9- 348	AA		C
"	9- 349	AA		C
"	9- 369	AA		C
"	10- 71	AA		C
"	10- 90	AA		C
"	10- 102	AA		C
VRS-TS2AD100J	9- 257	AA		C
"	9- 299	AA		C
"	9- 304	AA		C
"	9- 327	AA		C
"	10- 95	AA		C
"	10- 97	AA		C
VRS-TS2AD101J	9- 161	AA		C
"	9- 177	AA		C
"	9- 183	AA		C
"	9- 201	AA		C
"	9- 203	AA		C
"	9- 204	AA		C
"	9- 205	AA		C
"	9- 206	AA		C
"	9- 209	AA		C
"	9- 226	AA		C
"	9- 227	AA		C
"	9- 241	AA		C
"	9- 244	AA		C
"	9- 245	AA		C
"	9- 247	AA		C
"	9- 250	AA		C
"	9- 255	AA		C
"	10- 72	AA		C
"	10- 73	AA		C
VRS-TS2AD102J	9- 296	AA		C
"	9- 308	AA		C
"	9- 336	AA		C
VRS-TS2AD103J	9- 236	AA		C
"	9- 237	AA		C
"	9- 238	AA		C
"	9- 239	AA		C
"	9- 240	AA		C
"	9- 242	AA		C
"	9- 243	AA		C
"	9- 246	AA		C
"	9- 248	AA		C
"	9- 249	AA		C
"	9- 253	AA		C
"	9- 256	AA		C
"	9- 259	AA		C
"	9- 260	AA		C
"	9- 262	AA		C
"	9- 264	AA		C
"	9- 266	AA		C
"	9- 267	AA		C
"	9- 269	AA		C
"	9- 275	AA		C
"	9- 288	AA		C
"	9- 301	AA		C
"	9- 307	AA		C
"	9- 309	AA		C
"	9- 321	AA		C
"	9- 322	AA		C
"	9- 329	AA		C
"	9- 334	AA		C
"	9- 370	AA		C
"	10- 74	AA		C
"	10- 76	AA		C
"	10- 77	AA		C
"	10- 88	AA		C
"	10- 96	AA		C
"	10- 101	AA		C

PARTS CODE	NO.	PRICE RANK	NEW MARK	PART RANK
VRS-TS2AD104J	9- 234	AA		C
"	10- 81	AA		C
VRS-TS2AD105J	9- 280	AA		C
VRS-TS2AD106J	9- 233	AA		C
VRS-TS2AD121J	9- 274	AA		C
VRS-TS2AD122J	10- 92	AA		C
VRS-TS2AD133J	10- 89	AA		C
VRS-TS2AD151J	9- 224	AA		C
"	9- 230	AA		C
"	9- 232	AA		C
"	9- 276	AA		C
"	9- 277	AA		C
"	9- 278	AA		C
"	9- 286	AA		C
"	9- 289	AA		C
"	9- 291	AA		C
"	9- 294	AA		C
"	9- 333	AA		C
"	9- 337	AA		C
"	9- 338	AA		C
"	9- 339	AA		C
"	9- 340	AA		C
VRS-TS2AD153J	9- 252	AA		C
"	9- 303	AA		C
"	10- 99	AA		C
"	10- 100	AA		C
VRS-TS2AD182J	9- 215	AA		C
"	9- 216	AA		C
VRS-TS2AD201J	9- 273	AG		C
"	9- 290	AG		C
VRS-TS2AD203J	9- 217	AA		C
"	9- 222	AA		C
"	9- 311	AA		C
"	9- 335	AA		C
"	10- 87	AA		C
VRS-TS2AD221J	9- 192	AA		C
"	9- 194	AA		C
"	9- 195	AA		C
"	9- 197	AA		C
"	9- 198	AA		C
"	9- 199	AA		C
"	9- 200	AA		C
"	9- 202	AA		C
"	10- 82	AA		C
"	10- 83	AA		C
"	10- 94	AA		C
"	10- 98	AA		C
VRS-TS2AD222J	10- 78	AA		C
VRS-TS2AD223J	9- 293	AA		C
"	9- 297	AA		C
"	10- 84	AA		C
VRS-TS2AD271J	9- 191	AA		C
"	9- 196	AA		C
"	9- 207	AA		C
"	9- 208	AA		C
"	9- 214	AA		C
"	9- 254	AA		C
"	9- 270	AA		C
"	9- 283	AA		C
"	9- 285	AA		C
"	9- 292	AA		C
"	9- 302	AA		C
"	9- 317	AA		C
"	9- 319	AA		C
"	9- 342	AA		C
"	9- 343	AA		C
"	9- 344	AA		C
"	9- 345	AA		C
"	9- 346	AA		C
"	9- 360	AA		C
"	9- 366	AA		C
"	9- 367	AA		C
"	9- 368	AA		C
VRS-TS2AD273J	9- 263	AA		C
VRS-TS2AD3R0J	9- 316	AA		C
VRS-TS2AD302J	9- 312	AA		C
VRS-TS2AD303J	9- 211	AA		C
"	9- 261	AA		C
"	9- 298	AA		C
"	9- 305	AA		C

PARTS CODE	NO.	PRICE RANK	NEW MARK	PART RANK
VRS-TS2AD303J	9- 331	AA		C
"	9- 341	AA		C
"	9- 350	AA		C
"	10- 79	AA		C
VRS-TS2AD331J	9- 172	AA		C
"	9- 173	AA		C
"	9- 174	AA		C
"	9- 175	AA		C
"	9- 176	AA		C
"	9- 178	AA		C
"	9- 179	AA		C
"	9- 180	AA		C
"	9- 181	AA		C
"	9- 182	AA		C
"	9- 184	AA		C
"	9- 185	AA		C
"	9- 186	AA		C
"	9- 187	AA		C
"	9- 188	AA		C
"	9- 189	AA		C
"	9- 190	AA		C
"	9- 193	AA		C
"	9- 268	AA		C
"	9- 272	AA		C
VRS-TS2AD332J	9- 212	AA		C
VRS-TS2AD333J	9- 251	AA		C
"	9- 258	AA		C
"	9- 330	AA		C
"	10- 86	AA		C
VRS-TS2AD471J	9- 265	AA		C
"	9- 352	AA		C
"	9- 353	AA		C
"	9- 354	AA		C
"	9- 355	AA		C
"	9- 356	AA		C
"	9- 357	AA		C
"	9- 358	AA		C
"	9- 359	AA		C
"	9- 361	AA		C
"	9- 362	AA		C
"	9- 363	AA		C
"	9- 364	AA		C
"	9- 365	AA		C
VRS-TS2AD472J	9- 213	AA		C
"	9- 218	AA		C
"	9- 219	AA		C
"	9- 221	AA		C
"	9- 223	AA		C
"	9- 225	AA		C
"	9- 228	AA		C
"	9- 229	AA		C
"	9- 295	AA		C
"	9- 306	AA		C
VRS-TS2AD474J	9- 220	AA		C
VRS-TS2AD562J	9- 210	AA		C
"	9- 231	AA		C
VRS-TS2AD563J	10- 80	AA		C
VRS-TS2AD622J	10- 85	AA		C
VRS-TS2AD683J	10- 75	AA		C
VRS-TS2AD820J	9- 351	AA		C
VRS-TS2AD822J	9- 328	AA		C
VRSTS2AD1183F	9- 318	AA		C
VRSTS2AD1202F	10- 91	AB	N	C
VRSTS2AD1742F	9- 314	AA		C
VRSTS2AD3602F	10- 93	AA		C
VRSTS2AD4752F	9- 310	AA		C
VRSTS2AD8662F	9- 313	AA		C
"	9- 315	AA		C
VSBS108///-1	10- 56	AE		B
VSDTC114EK/-1	10- 57	AB		B
"	10- 59	AB		B
"	10- 60	AB		B
"	10- 61	AB		B
"	10- 62	AB		B
"	10- 63	AB		B
"	10- 64	AB		B
"	10- 65	AB		B
VSDTD114EK/-1	9- 373	AC		B
"	9- 379	AC		B
VSRCNC1402/-1	9- 372	AC	N	B

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PARTS CODE	NO.	PRICE RANK	NEW MARK	PART RANK
VSRNC1402//1	9- 374	AC	N	B
"	9- 375	AC	N	B
"	9- 376	AC	N	B
"	9- 377	AC	N	B
"	9- 380	AC	N	B
"	9- 381	AC	N	B
VS2SC1815GR-1	12- 4	AB		B
VS2SC2412KR-1	10- 58	AD		B
VS2SC2412KS-1	9- 378	AB		B
[X]				
XBPSTD30P06K00	50- B2	AA		C
XBPSE30P08K00	50- B4	AA		C
XBPSTN40P06K00	50- B10	AA		C
XEBSD30P08000	50- B5	AA		C
XEBSE30P08000	50- B6	AA		C
XBSF30P12000	50- B7	AA		C
XEPSTD30P06K00	50- B3	AB	N	C
XHBSD26P05000	50- B8	AC	N	C
XHBSD30P05000	50- B9	AA		C
XUBSD20P06000	50- B12	AA		C
[0]				
0CBLRZ6251ZQ/	11- 34	AP	N	B
0CBLRZ6252ZP/	11- 35	AP	N	B
0CBPCZ0160ZZ/	11- 19	AE		C
0CBPCZ0193ZZ/	11- 18	AF		C
0CBPJCTY1251/	11- 30	AK	N	A
"	11- 31	AK		A
0CBPKZ0194ZZ/	11- 17	AC		C
0CBPZZ0739ZZ/	11- 20	AE		C
0CBUAC0023AZ/	11- 39	AD	N	B
"	11- 40	AD	N	B
0CBUAC0027AZ/	11- 38	AE		B
0CBUAG0139AZ/	11- 37	AQ	N	B
0CBUBA0004AZ/	11- 21	AB		B
"	11- 23	AB		B
0CBUBB0224AZ/	11- 24	AK	N	B
0CBUBC0215DK/	11- 26	AD	N	B
"	11- 27	AD	N	B
"	11- 28	AD	N	B
"	11- 29	AD	N	B
0CBUBC0248AZ/	11- 22	AD		B
0CBUBC0302AZ/	11- 25	AE	N	B
0CBUBDAE300D/	11- 62	AD		B
0CBUBDBW3R6B/	11- 61	AB		B
0CBUBDBW6R2C/	11- 63	AB		B
0CBUCB0107AZ/	11- 32	AQ		B
0CBUDC0163BB/	11- 36	AH	N	B
0CBUDZ0052ZZ/	11- 58	AG		B
0CBUEEB153CT/	11- 43	AC		C
0CBUEEB220CW/	11- 50	AC		C
0CBUEEB242CT/	11- 55	AC		C
0CBUEEB271CT/	11- 53	AC		C
0CBUEEB471CT/	11- 44	AC		C
0CBUEEB564CT/	11- 45	AC	N	C
"	11- 46	AC		C
0CBUEEB682CT/	11- 54	AC		C
0CBUEEC222BS/	11- 52	AC		C
0CBUEFC564BA/	11- 41	AC		C
0CBUEFD271CC/	11- 51	AD		C
0CBUEFD391CC/	11- 49	AD		C
0CBUEFER27CH/	11- 42	AE	N	C
0CBUEFE563CL/	11- 47	AD		C
"	11- 48	AD	N	C
0CBUEFF102BK/	11- 56	AD		C
0CBUEZ0524ZZ/	11- 59	AD		B
0CBUFBA501DH/	11- 60	AC		B
0CBUGAC101HD/	11- 15	AC		C
0CBUGAC471TS/	11- 14	AF	N	C
0CBUGAE821TS/	11- 13	AH	N	C
0CBUGCF471CB/	11- 16	AD		C
0CBUGCM102AT/	11- 3	AE		C
"	11- 4	AE		C
0CBUGCM222AU/	11- 11	AD	N	C
0CBUGCS222AP/	11- 12	AC		C
0CBUGCU102BQ/	11- 6	AC		C
0CBUGCU221BQ/	11- 7	AD		C
0CBUGFF222AR/	11- 10	AB		C
0CBUGFF472AR/	11- 8	AB		C
0CBUGFGF683AR/	11- 9	AD		C
0CBUGFF2104GQ/	11- 1	AF	N	C

[illegible][illegible]

CAUTION FOR BATTERY REPLACEMENT

- (Danish) ADVARSEL !
Lithiumbatteri-Eksplosionsfare ved fejlagtig håndtering.
Udskiftning må kun ske med batteri af samme fabrikat og type.
Levér det brugte batteri tilbage til leverandoren.
- (English) Caution !
Danger of explosion if battery is incorrectly replaced.
Replace only with the same or equivalent type
recommended by the equipment manufacturer.
Discard used batteries according to manufacturer's
instructions.
- (Finnish) VAROITUS
Paristo voi räjähtää, jos se on virheellisesti asennettu.
Vaihda paristo ainoastaan laitevalmistajan suosittelemaan
tyyppiin. Hävitä käytetty paristo valmistajan ohjeiden
mukaisesti.
- (French) ATTENTION
Il y a danger d'explosion s' il y a remplacement incorrect
de la batterie. Remplacer uniquement avec une batterie du
même type ou d'un type recommandé par le constructeur.
Mettre au rebut les batteries usagées conformément aux
instructions du fabricant.
- (Swedish) VARNING
Explosionsfare vid felaktigt batteribyte.
Använd samma batterityp eller en ekvivalent
typ som rekommenderas av apparattillverkaren.
Kassera använt batteri enligt fabrikantens
instruktion.
- (German) Achtung
Explosionsgefahr bei Verwendung inkorrektter Batterien.
Als Ersatzbatterien dürfen nur Batterien vom gleichen Typ oder
vom Hersteller empfohlene Batterien verwendet werden.
Entsorgung der gebrauchten Batterien nur nach den vom
Hersteller angegebenen Anweisungen.

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